


ERRATUM.

Page 24 should be prefaced by

ENTERIC FEVER.



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BOROUGH OF ECCLES.

ANNUAL

REPORT

OF THE

Medical Officer of Health

AND

SCHOOL MEDICAL OFFICER

W. M. HAMILTON, M.D., D.P.H.

For the Year 1910.

Issued by Order of the Health Committee.

ECCLES :

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HEALTH COMMITTEE.

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Municipal Year Ending 1911.

Chairman—Alderman N. PARR, J.P.

Vice-Chairman : Councillor Dr. J. ORR.

THE MAYOR (Councillor W. SCOTT FORBES).

Alderman W. J. NUTTALL, J.P.

Alderman W. PEARSON.

Councillor R. EVANS.

„ T. H. GARDNER, B.Sc.

„ J. K. McMYN.

„ F. W. OGDEN.

Municipal Year Ended 1910.

Chairman : Alderman N. PARR, J.P.

Vice-Chairman : Councillor Dr. J. ORR.

THE MAYOR (Alderman T. THOMPSON, J.P.)

Alderman W. J. NUTTALL, J.P.

„ W. PEARSON.

Councillor R. EVANS.

„ A. FARNIE, J.P.

„ T. H. GARDNER, B.Sc.

„ J. K. McMYN.

Meetings of the Health Committee held monthly on the second Monday following the Council Meeting, in the Town Hall.

Annual Report of the Medical Officer of Health.

1910.

To the Chairman and Members of the Health Committee.

GENTLEMEN,

I have pleasure in submitting my Annual Report for the year ending December 31st, 1910. There has again been a substantial increase in sanitary work. It is pleasing to report that, notwithstanding the outbreak of Enteric Fever in the latter part of the year, the death rate has fallen from 13·6 to 12·8 per 1,000. This rate is the lowest on record for this Borough. The zymotic rate is 1·3; the phthisis rate is ·58 per 1,000.

The infantile mortality rate is, I regret to report, higher than last year, namely, 121 per 1,000 registered births, as compared with 110 for 1909. This subject is fully dealt with in the Report.

The organisation of the Health Department has continued to work well, and the manifold duties devolving on it have been thoroughly and conscientiously carried out. I have again to record my thanks to my colleagues, Mr. Laskey, Mr. Laws and Mr. Knowles, for their valuable assistance.

The most important work in which the Committee is engaged—the conversion of the filthy privy pit into cleanly water closets—has made good progress during the year. Since 1895 no new privy has been built. During last year 316 privy pits were converted to 548 water closets; 88 privy pits and ashpits were abolished. Your Committee contributes twenty-five shillings towards the conversion of privies which have not been condemned by your Medical Officer of Health. Already in addition to the saving of life and the improvement of health, the contribution has proved a good investment in the decreased incidence of zymotic diseases which can be directly traced to food infection by dust from the midden and by flies generated in it, viz.:—Enteric Fever and Diarrhœa. The epidemic of Enteric Fever from which the Borough

suffered was entirely due to external infection. Dr. Copeman, the Local Government Board Inspector, stated there was no imputation on the sanitary administration of the Borough.

The Dairies and Cowsheds have been thoroughly and systematically inspected during the year.

The inspection of other food stuffs produced and sold in the district has been thoroughly carried out. In many cases unsound food has been dealt with. In only one case was the stuff so bad as to necessitate prosecution. In this case penalties were enforced. The water supply is from the Manchester Corporation. It is constant and pure.

No complaints as to the pollution of the Folly Brook or the Ship Canal have been received during the year.

There have been several cases of flooding of cellars and schools during the year. The Highways Committee have this matter in hand, and a scheme for the prevention of this nuisance is in course of preparation. The Sewage Farm continues to work well. A Report from the Sewage Farm Manager is included.

The arrangements for the removal of house refuse are efficient and up to date, as the following extract from the Cleansing Superintendent's (Mr. Laskey) Report will shew:—"There is an increase of upwards of 51,000—or almost 1,000 weekly—in the number of cleansings of ashbins. The reduction by over 40 per cent in the number of cleansings of ashpits and privies is accounted for by the continued abolition of these conveniences, and their substitution by water closets and ashbins. During the year 404 privies and ashpits were thus dealt with, and the number still existing in the Borough is as follows:—

WARD.				Privies	Ashpits
BARTON ...	...	...	...	76	13
ECCLES ...	...	...	...	25	6
IRWELL...	...	...	...	29	15
MONTON...	...	...	...	55	26
PATRICROFT	...	...	...	80	4
WINTON...	...	...	...	52	—
Total	...	..	...	317	64

“ The reduction in the number of loads of refuse removed is due to the falling off in ashpit work. The number of bins emptied per load averaged 79, as compared with 82 for the previous year. The number of premises within the Borough is 9,923, and the average quantity of refuse removed from each during the year was .77 of a load.

“ The number of ashbins in use at the end of the year was 9,435, an increase by 793 over the figures of the previous year. As 176 of these were for the newly erected houses, the balance of 617 represents the number of privy ashpit houses newly supplied with water closets and ashbins, and thus placed upon the system of weekly removal of house refuse.”

During the latter part of the year an enormous and unprecedented strain was imposed on the department through the outbreak of Enteric Fever. The epidemic came on us like an avalanche. It followed a period of three weeks, during which the Borough was absolutely free from infectious disease of any sort. I am pleased to report that all the members of the Health Staff worked well. They worked early and late, and are deserving of the highest praise for the untiring efforts they put forth.

The administration of the Factories and Workshops Act has been thoroughly carried out.

The Common Lodging Houses have been inspected at frequent intervals, as also have been the Houses Let in Lodgings. Many cases of overcrowding have been dealt with.

School Medical Inspection is dealt with in a special section.

The demolition of the remaining portion of the Insanitary Area is being proceeded with, and the remaining houses required by the Local Government Board have been built.

I have again to tender my thanks to the Chairman, Mr. Alderman Parr, J.P., and the members of the Committee, for their hearty support during the year. The paramount desire of the Committee has been the improvement of the surroundings and health of the people. It is gratifying to record that every sanitary recommendation of the Committee has received the cordial support of the Council.

I am, Gentlemen,

Your obedient Servant,

W. M. HAMILTON.

SECTION I.

Trade, &c., of the District.

The Borough of Eccles is situate four miles West of Manchester. It extends from the Gilda Brook, the Boundary of the Royal Borough of Salford, westward for about two and three quarter miles. It is bounded on the West by Chat Moss, and on the South by the Manchester Ship Canal.

The area of the Borough is 2,008 acres, and the population according to the last census, 34,369—now estimated at 42,500.

The substratum rock is mainly red sandstone, considerable patches of the boulder clay remain in places. In the Peel Green or West end of the Borough—in Barton Road by the Bridgewater Canal and by the side of the Ship Canal are found beds of drift sand. At Monton Green and Slack Lane, coal is found six feet from the surface, being overlaid by the boulder clay.

SHIP CANAL.—No complaints as to the state of the Ship Canal were received during the year.

OPEN SPACES.—The Recreation Grounds have been used to a great and increasing extent by the public. The provision of music weekly in each ground has been a great inducement to keep the people in the open air.

BATHS.—27,452 persons used the Baths during the year. Of these 8,276 availed themselves of the arrangements made by the Baths Committee for free bathing.

TRADE AND MANUFACTURES.—The cotton and iron trades provide the principal industries of the Borough, but there are also silk mills, metallurgical works, and other industries.

WATER SUPPLY.—This is from the Manchester Corporation, and is excellent.

SECTION II.

STATISTICAL SUMMARY, 1910.

POPULATION estimated to the middle of the year . . .	42,500
BIRTHS—Males, 481; Females, 482.	963
ANNUAL RATE of BIRTHS per 1,000 of population . . .	22.6
DEATHS Registered in the Borough — Males, 313; Females, 273	586
ANNUAL DEATH-RATE per 1,000 of the population, after deducting the Deaths belonging to out-districts, and adding Deaths of residents occurring outside district...	12.8
ZYMOTIC DEATH-RATE	1.3
INFANTILE MORTALITY (per 1,000 Births) ...	121
EXCESS of REGISTERED BIRTHS over DEATHS ...	377
DENSITY.—The Mean Density of the Borough per acre is equal to	21.1
Persons per acre:—In BARTON WARD 22.7; ECCLES WARD, 64.0; IRWELL WARD, 33.1; MONTON & PARK WARD, 12.5; PATRICROFT WARD, 38.8; WINTON WARD, 12.7.	
AREA:—The total Area of the Borough of Eccles ...	ACRES. 2,008
RATEABLE VALUE for District Rate purposes at April 1st, 1910	£169,244
NETT VALUE of a PENNY RATE	£651

England and Wales, 1910.

BIRTH RATE	24.8
DEATH RATE	13.4
ZYMOTIC DEATH-RATE . . . . .	.99
INFANTILE MORTALITY (per 1,000 Births) ...	106

SECTION III.

Vital Statistics.

ESTIMATED POPULATION.—The census returns taken in April 1901 show that the population at that date was 34,369. The population has to be estimated to the end of June (middle of the year); and I now estimate the population at 42,500.

Table shewing Acreage, Number of Houses, and Population of the various Wards at Census, and estimated at the end of June, 1910.

Ward.	Acreage.	Census 1901.						Estimated June 1910			Population
		Dwelling-houses.			Population.			Dwelling-houses.			
		Inhabi- ted.	Unin- habit'd	Total	Males	Fe- males.	Total.	Inhabi- ted.	Unin- habit'd	Total	
BARTON	378	1162	45	1207	2662	2754	5416	1867	77	1944	8596
ECCLES	106	1075	32	1107	2311	2609	4920	1473	138	1611	6783
IRWELL	167	1128	54	1182	2475	2664	5139	1202	51	1253	5537
MONTON and PARK	528	1132	68	1200	2214	3226	5440	1435	125	1560	6609
PATRICROFT ...	170	1329	41	1370	3320	3448	6768	1432	116	1548	6595
WINTON	659	1450	43	1493	3212	3474	6686	1820	72	1892	8380
TOTALS FOR THE BOROUGH	2008	7276	283	7559	16194	18175	34369	9229	579	9808	42500

BIRTHS.—The number of births registered in the Borough during the year was 963, as against 993 for 1909. Of these 481 were males, and 482 females; this gives a Birth rate of **22'6** per 1,000 of the population, as against 23'9 for 1909; 27'0 for 1908; and 26'1 for 1907. There were 35 illegitimate births, being 3'6 per cent of the total number of births.

DEATHS.—Of the 586 deaths registered as having occurred within the Borough, 313 were males, and 273 females; of these 72 were of persons belonging to outside districts. (*see Table*). Twenty-two deaths belonging to this Borough occurred at the Ladywell Sanatorium, and 39 in Institutions in Manchester, Salford, and other places outside the Borough. After correcting for the above, the death-rate for the year was **12'8** per 1000, of the population, as against 13'6 for 1909.

Table of Births and Deaths belonging to various Wards.

Ward.	Total Deaths.	Death rate per 1,000.	Births.	Birth rate per 1,000.
BARTON	121	14'0	219	25'4
ECCLES	86	12'6	142	20'9
IRWELL	94	16'9	151	27'2
MONTON & PARK ...	58	8'7	102	15'4
PATRICROFT	91	13'8	152	23'0
WINTON	95	11'3	197	23'5
TOTALS for the BOROUGH	545	12'8	963	22'6

I append the following table showing the mortality rates of England and Wales, and in the 213 towns, as compared with those of this Borough.

VITAL STATISTICS IN ENGLAND AND WALES (1910).

Annual Birth Rates, Death Rates, and the Death Rates from the Principal Epidemic Diseases.

	Annual rates per 1000 living.				Deaths under one year to 1000 Births.
	Births.	Deaths.		Principal Epidemic Diseases.	
		Crude.	Cor-rected.*		
England and Wales	24·8	13·4	13·4	0·99	106
77 Great Towns.....	25 0	13·4	14·3	1·23	115
136 Smaller Towns	23·7	12·4	12·9	0·88	104
England and Wales, less the 213 Towns ...	25·0	13·6	12·8	0·74	96
Eccles.....	22·6		12·6	1·3	121

*The corrected death rates are the rates which would have been recorded had the age and sex constitution of the populations of the several areas been identical with that of England and Wales as enumerated in 1901.

As before stated 72 deaths of persons from outside districts occurred within the Borough. The following table indicates the localities to which they belong, and to which they have been allocated. The Medical Officers of Health of those districts have been supplied with the particulars of those deaths.

Place of Residence.	Place of Death.	No. of Deaths.
Stretford	UNION WORKHOUSE	28
Swinton	Do.	17
Worsley	Do.	11
Urmston	Do.	6
Irlam and Cadishead	Do.	5
Barton Rural S.A... ..	Do.	3
Manchester	Do.	2
Manchester	ST. JOSEPH'S HOME	4
Ashton-under-Lyne.. ..	Do.	1
Royton	Do.	1
Tottingham	Do.	1
Salford	ECCLES & PATRICROFT HOSPITAL	1
	Total	80

MORTALITY IN AGE GROUPS :—

Deaths under one year	117
do. 1 year and under 5 years	62
do. 5 years and under 15 years	17
do. 15 years and under 25 years	21
do. 25 years and under 65 years	194
do. over 65 years	134
	545

INFANTILE MORTALITY :

The total number of deaths under one year belonging to the Borough was 117. This gives an infantile rate of 121 per 1000 births, as compared with 110 for 1909 and 119 for 1908.

*ZYMOTIC DEATH-RATE :—

The number of deaths due to the principal zymotic diseases was 58. This gives a rate of 1·3 per 1000 of population, as compared with '67 for 1909, and '99 for England and Wales.

Scarlet Fever.—One death was due to this disease.

Measles.—Thirteen deaths were due to this disease.

Enteric Fever.—Twenty-one deaths

Diphtheria.—Two deaths, as compared with Eight for 1909.

Diarrhœa—There were 8 deaths from this disease. All these deaths were under five years of age.

* Small-Pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Fever—(Typhus, Typhoid, and Continued) and Diarrhœa.

Whooping Cough.—There were 13 deaths from this disease.

Acute Lung Diseases.—Bronchitis, Pneumonia and Pleurisy.—The deaths from these diseases numbered 96 ; giving a death rate of 2·2 per 1,000, as compared with 2·6 for 1909.

Influenza.—There were 5 deaths from this disease.

Phthisis.—25 deaths were attributed to this disease, the death rate from which was equal to ·58 per 1,000, as compared with 1·1 in 1909.

Cancer.—38 deaths were attributed to this disease, the death rate from which was equal to ·89.

Other Tubercular Diseases.—The deaths from these diseases numbered ·19, giving a death rate of ·44 per 1,000.

**Total Deaths & Death Rates from all causes. Children under
5 years of age. Zymotic and Pulmonary Diseases.
For the Years 1876-1910.**

Year.	Total Deaths	Rate per 1000	Zymotic Diseases	Rate per 1000	Deaths under 5	Rate per cent.	Phthisis	Rate per 1000	Acute Chest Diseases	Rate per 1000.
1876	423	25.4	66	3.9	158	37.5	53	3.1	100	6.0
1877	440	22.7	89	4.6	175	40.0	46	2.3	84	4.3
1878	443	22.2	68	3.4	196	44.2	49	2.4	90	4.5
1879	396	19.2	28	1.3	177	43.8	60	2.9	116	5.6
1880	437	20.5	87	4.0	176	43.7	59	2.7	96	4.5
5 years average	427	22.0	67	3.4	176	41.8	53	2.6	97	4.9
1881	383	17.4	5	.5	155	40.4	66	3.0	70	3.1
1882	434	19.0	59	2.5	190	49.0	46	2.0	113	4.9
1883	371	15.7	53	2.2	173	47.0	45	1.9	90	3.8
1884	399	16.4	83	3.4	181	45.0	41	1.6	87	3.5
1885	419	16.6	54	2.1	157	37.0	46	1.8	91	3.6
5 years average	401	17.0	61	2.5	171	43.6	48	2.0	90	3.7
1886	419	16.1	47	1.8	186	44.1	40	1.5	93	3.5
1887	475	17.8	90	3.3	219	42.6	41	1.5	127	4.7
1888	437	15.9	54	1.9	183	41.8	49	1.7	100	3.6
1889	465	16.4	79	2.7	213	45.8	49	1.7	93	3.2
1890	603	20.8	50	1.7	218	36.1	50	1.7	142	4.9
5 years average	479	17.4	64	2.2	203	42.0	45	1.6	111	3.9
1891	683	22.3	94	3.1	292	42.7	43	1.4	143	4.7
1892	554	18.1	35	1.1	205	37.0	50	1.6	93	3.0
1893	608	18.6	82	2.5	247	40.6	39	1.2	113	3.5
1894	443	13.0	49	1.4	183	41.3	47	1.4	74	2.3
1895	552	16.2	104	3.1	239	41.4	54	1.6	97	2.9
5 years average	568	17.6	72	2.2	233	40.6	45	1.4	104	3.2
1896	551	15.7	104	3.0	221	40.1	50	1.4	76	2.2
1897	580	16.7	94	2.7	248	42.7	56	1.6	115	3.3
1898	573	16.6	114	3.2	232	40.0	44	1.2	95	2.7
1899	600	16.7	127	3.5	215	35.8	46	1.2	98	2.7
1900	619	17.0	91	2.5	220	35.5	38	1.0	107	2.9
5 years average	585	16.5	86	3.0	227	38.8	47	1.3	98	2.7
1901	570	16.5	94	2.7	217	38.0	43	1.2	94	2.7
1902	553	15.8	79	2.2	182	32.9	29	.8	90	2.5
1903	527	14.8	59	1.6	181	34.3	33	.92	94	2.6
1904	542	14.8	63	1.7	211	38.9	39	1.0	87	2.3
1905	511	13.4	42	1.1	177	32.6	35	.92	95	2.5
5 years average	540	15.0	67	2.0	193	35.3	35	.96	92	2.5
1906	534	13.8	47	1.2	189	35.3	43	1.1	94	2.4
1907	585	15.0	59	1.5	193	30.3	39	1.0	115	2.9
1908	558	13.9	62	1.5	196	35.1	30	.75	117	2.9
1909	568	13.6	28	.67	158	27.9	46	1.1	111	2.6
1910	545	12.8	58	1.3	179	32.8	25	.58	96	2.2
5 years average	558	13.8	50	1.2	183	32.2	36	.90	106	2.6

Borough of Eccles.

Vital Statistics of whole district during 1910, and previous years.

Year.	Population esti- mated to middle of each year.	Births.		Total Deaths registered in the District.				Total Deaths in Public Institutions in the district.	Deaths of non-resi- dents registered in Public Institutions in the district.	Deaths of residents registered in Public Institutions beyond the district.	Nett Deaths at all ages belonging to the district.	
				Under 1 year of Age.		At all ages.					Number	Rate.
		Number	Rate *	Number	Rate per 1000 births registered.	Number	Rate *					
1	2	3	4	5	6	7	8	9	10	11	12	13
1900	34930	913	26.8	145	158	653	19.1	102	68	28	619	18.1
1901	34500	931	26.9	153	164	595	17.2	96	52	32	575	16.6
1902	35000	950	27.1	107	112	583	16.6	123	69	39	553	15.8
1903	35600	1014	28.4	123	121	558	15.2	117	61	30	527	14.8
1904	36400	1009	27.7	146	144	588	16.1	104	67	21	542	14.8
1905	38000	965	25.3	107	111	571	15.0	139	86	25	511	13.4
1906	38500	1010	26.2	141	139	597	15.5	127	86	23	534	13.8
1907	39000	1019	26.1	121	119	653	16.7	145	91	23	585	15.0
1908	40000	1081	27.0	129	119	596	14.9	123	65	27	558	13.9
1909	41500	993	23.9	110	110	606	14.6	133	74	36	568	13.6
Averages for Years 1900—1909	37253	988	26.5	128	129	600	16.1	120	71	82	557	14.9
1910	42500	963	22.6	117	121	586	13.7	136	80	39	545	12.8

* Rates in columns 4, 8, and 13 calculated per 1000 of estimated population.

Area of District in acres (exclusive of area covered by water)... 2,008

Total population at all ages 34,369

Number of Inhabited Houses 7276

Average number of persons per house ... 4.7

} At
Census,
of 1901.

The Union Workhouse is situate within the Borough.

BOROUGH OF ECCLES.

Vital Statistics of separate Localities in 1910 and previous years.

Names of Localities	Whole District.				Barton Ward.				Eccles Ward.				Irwell Ward.				Monton Ward.				Patricroft Ward.				Winton Ward.			
	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
1900	34030	913	619	145	5353	163	117	23	4872	128	72	17	5071	165	135	39	5392	81	50	5	6718	194	109	23	6624	182	136	38
1901	34500	931	575	153	5431	131	97	29	4950	134	78	19	5149	147	130	35	5470	106	50	10	6798	199	104	27	6702	214	116	33
1902	35000	950	553	167	5536	169	88	15	5010	114	89	14	5155	154	107	23	5545	90	64	6	6626	209	116	23	6828	234	89	20
1903	35600	1014	527	123	5666	190	100	25	5140	114	70	12	5155	168	103	39	5665	119	57	5	7046	200	107	20	6928	217	93	22
1904	36400	1009	542	146	5852	182	82	23	5237	117	74	19	5235	163	90	28	5737	112	70	11	7205	210	114	31	7134	225	100	34
1905	38000	995	511	107	6835	190	92	21	5740	116	84	12	5190	132	72	17	6076	106	46	6	6720	209	113	27	7439	212	104	24
1906	38500	1010	524	141	6985	209	114	31	5890	136	78	14	5190	145	82	23	6126	95	59	7	6770	197	88	28	7539	237	113	38
1907	39000	1019	585	121	7227	225	107	35	6146	131	95	24	4902	143	90	17	6149	92	65	3	6751	191	109	18	7825	237	119	24
1908	40000	1081	558	129	7663	240	118	33	6222	136	76	17	4992	155	81	22	6305	100	53	3	6852	193	106	27	7906	257	124	27
1909	41500	993	568	110	8005	224	112	32	6444	132	81	10	5360	157	87	24	6467	89	63	7	6920	195	113	19	8304	196	112	18
Averages of Years 1900 to 1909	37253	988	557	128	6455	192	102	26	5565	125	79	15	5139	152	98	26	5899	99	58	6	6870	199	107	24	7322	221	110	28
1910	42500	963	545	117	8596	210	121	36	6783	142	86	11	5537	151	94	21	6609	102	58	7	6595	151	91	18	8380	197	94	24

BOROUGH OF ECCLES.

—0—

Causes of, and ages at, Death during the Year 1910.

Causes of Death.	Deaths at the subjoined ages of "residents" whether occurring in or beyond the district.						Deaths at all ages of "resi- dents" belonging to localities whether occurring in or beyond the district.						Total Deaths whether of "residents" or "non-resi- dents" in Public Institu- tions in the district.		
	All ages	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Whole Borough	Barton Ward	Eccles Ward.	Irwell Ward	Monton Ward		Patricroft Ward	Winton Ward
Small-pox ...															
Measles. ...	13	6	6	1				13	1	2	3	2	3	2	7
Scarlet Fever	1		1					1	1						
Whooping Cough	13	8	5					13	6	1	2	1	1	2	
Diphtheria including															
Membranous Croup	2		1	1				2			2				
Croup															1
Fever. { Typhus															
Enteric	21		1	4	5	11		21	3	6	8		3	1	
Other continued															
Epidemic Influenza	5					4	1	5		3		1	1		
Cholera (English)															
Plague															
Diarrhoea	8	6	2					8	1	2	3		1	1	
Enteritis	8	5	2			1		8	2	1	2			3	2
Gastritis	5	5						5	1	1	3				
Interperal Fever	1						1	1					1		
Erysipelas	1				1			1						1	
Phthisis	25			1	3	21		25	6	3	7	1	4	4	18
Other tuberculous diseases	19	2	10	3		3	1	19	3		4	4	1	7	2
Cancer, malignant do.	38				1	25	12	38	8	5	5	3	6	11	6
Bronchitis	60	11	3			25	21	60	14	8	8	5	12	13	15
Pneumonia	34	14	10		1	6	3	34	11	3	5	3	5	7	1
Pleurisy	2					1	1	2		1				1	
Other diseases of the respiratory organs	3	1				1	1	3	1					2	1
Alcoholism															
Cirrhosis of liver	10					9	1	10		2	2	2	2	2	2
Veneral diseases															
Premature birth	27	27						27	11	3	3	2	5	3	2
Diseases and accidents of parturition	3				1	2		3	1		2				1
Heart Diseases	45	2	1	1	2	24	15	45	11	4	5	8	11	6	29
Accidents	19		4		2	10	3	19	7	1		2	4	5	10
Suicides	4					4		4				1	1	2	1
Manslaughter	2			1		1		2		1				1	1
Other Septic Disease	4	1	1			2		4			3	1			3
All other causes	172	29	15	5	5	44	74	172	34	38	27	22	30	21	34
All causes	545	117	62	17	21	194	134	545	121	86	94	58	91	95	136

SECTION IV.

—0—
RECORD OF INFECTIOUS DISEASES.
—0—

The total number of cases notified during the year was 292, as compared with 262 for 1909.

Diseases.	1901		1902.		1903.		1904.		1905		1906.		1907.		1908		1909		1910.	
	Cases	Notified	Cases	Notified	Deaths	Cases	Notified	Deaths	Cases	Notified	Cases	Notified	Deaths	Cases	Notified	Cases	Notified	Deaths	Cases	Notified
Small-Pox ... ..	...	...	4	...	14	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	143	10	191	11	139	3	113	3	134	6	208	5	186	5	180	7	171	4	58	1
Diphtheria	78	12	108	21	126	23	32	7	30	6	28	5	33	8	30	3	53	8	27	2
Membranous Croup ..	...	...	...	...	1	...	...	...	...	...	1	...	...	...	1	2	...	...	...	...
Enteric Fever	54	9	33	4	16	3	36	8	17	4	22	4	13	3	13	4	22	4	180	21
Puerperal Fever	5	5	5	5	2	1	2	1	2	...	1	...	1	...	...	...	2	...	2	1
Measles ... ..	...	7	...	11	...	15	...	4	...	16	...	3	...	5	...	18	...	1	...	13
Whooping Cough ... ..	...	5	...	24	...	2	...	22	...	6	...	...	...	24	...	15	...	2	...	13
Diarrhea and Dysentery	...	51	...	8	...	11	...	18	...	4	...	30	...	14	...	12	...	9	...	8
Erysipelas	14	2	33	3	21	2	19	...	27	1	9	2	20	1	7	...	14	...	22	1
Continued Fever ... ..	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
Cerebro Spinal Fever.	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Ophthalmia Neonatorum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Total	294	101	374	87	319	62	202	63	211	43	269	49	254	60	231	62	262	28	290	60

Monthly Return of Notification of Infectious Diseases.

1910	Scarlet Fever	Diphtheria & Membranous Croup	Enteric Fever	Puerperal Fever	Erysipelas	Ophthalmia Neonatorum	Totals.
January ...	5	1	5	1	1	...	13
February...	7	4	3	...	1	...	15
March ...	6	2	2	1	2	...	13
April ...	4	...	1	...	2	...	7
May ...	5	3	1	...	5	...	14
June ...	...	4	...	...	1	...	5
July ...	4	3	...	...	2	...	9
August ...	3	...	...	...	...	...	3
September.	9	1	...	...	3	...	13
October ..	8	1	2	...	2	...	13
November .	5	2	135	..	3	...	145
December .	5	6	31	...	...	1	43
Totals ...	61	27	180	2	22	1	293

Borough of Eccles—Cases of Infectious Disease Notified during the year 1910.

Notifiable Disease.	Cases Notified in whole District. At Ages.—Years.						Total Cases Notified in each locality.						No. of Cases removed to Hospital from each locality						Total cases removed to Hospital.	Deaths in Hospital of Patients removed from this District.			
	At all Ages	Under 1 Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and up- wards.	Whole district	Barton Ward	Eccles Ward	Irwell Ward	Monton Ward	Patricroft Wd	Winton Ward	Whole district	Barton Ward	Eccles Ward	Irwell Ward			Monton Ward	Patricroft Wd	Winton Ward
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	27	...	9	17	...	1	27	2	3	8	5	...	9	...	10	...	1	3	1	5	...	2	
Erysipelas	22	...	...	5	3	11	22	4	3	1	1	6	7	...	1	...	...	...	...	1	...	1
Scarlet Fever	58	..	14	34	7	3	58	15	14	5	5	6	13	1	13	1	6	2	1	2	...	1	
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	180	...	17	86	50	27	180	14	88	45	1	24	8	...	130	10	72	28	1	5	...	17	
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	2	...	...	...	1	1	2	...	...	...	1	1	...	...	2	...	...	...	1	...	...	1
Plague ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ophthalmia Neonato- rum	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	290	1	40	142	61	43	290	35	108	59	13	38	37	...	156	11	79	33	4	16	13	22	

Isolation Hospital—Ladywell Sanatorium, Salford. Total available beds 26.

Distribution of Infectious Diseases into Wards.

Diseases	BARTON		ECCLES		IRWELL		MONTON and PARK		PATRICROFT		WINTON		Total.	
	Total Notified.	Total Deaths.	Total Notified.	Total Deaths.	Total Notified.	Total Deaths.	Total Notified.	Total Deaths.	Total Notified.	Total Deaths.	Total Notified.	Total Deaths.	Cases Notified	Deaths
SMALL-POX ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SCARLET FEVER	15	...	14	1	5	...	5	...	6	...	13	...	58	1
DIPHTHERIA and	2	...	3	...	8	2	5	...	...	...	9	...	27	2
MEMBRANOUS CROUP...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ENTERIC FEVER	14	3	88	6	45	8	1	...	24	3	8	1	180	21
PUERPERAL FEVER ... ..	...	...	...	...	...	...	1	...	1	1	...	...	2	1
MEASLES .. ... ..	...	1	...	2	...	3	...	2	...	3	...	2	...	13
WHOOPING COUGH ... ..	...	6	...	1	...	2	...	1	...	1	...	2	...	13
DIARRHŒA and )	...	...	...	...	...	...	...	...	...	...	...	...	...	...
DYSENTERY.)	...	1	...	2	...	3	...	...	...	1	...	1	...	8
ERYSIPELAS	4	...	3	...	1	...	1	...	6	...	7	1	22	1
CONTINUED FEVER ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
OPHTHALMIA NEONATORUM	...	...	...	...	...	...	...	...	1	...	...	...	1	...
TOTAL	35	11	108	12	59	18	13	3	38	9	37	7	290	60

AMOUNT OF HOSPITAL ISOLATION OF INFECTIOUS DISEASES.—There were 156 cases of infectious diseases removed to hospital, being 53·8 per cent of the total number of cases notified.

Scarlet Fever—cases notified 58, removed 13, per centage 22·4

Diphtheria and Membranous Croup do. 27, do. 10, do. 37·0

Enteric fever do. 180, do. 130, do. 72·2

Puerperal fever do. 2, do. 2, do. 100·0

Erysipelas do. 22, do. 1, do. 4·5

In 1909, 32·8 per cent of notified cases were removed; 38·0 per cent in 1908, 30·3 per cent in 1907.

The Epidemic commenced on Nov. 14th with the notification of two cases. The notifications day by day were as follows:—

Nov. 14th, 1910 ...	2 cases	Dec. 5th, 1910 ...	7 cases
„ 15th, „ ...	1 „	„ 6th, „ ...	2 „
„ 16th, „ ...	11 „	„ 7th, „ ...	2 „
„ 17th, „ ...	24 „	„ 9th, „ ...	3 „
„ 18th, „ ...	19 „	„ 11th, „ ...	1 „
„ 19th, „ ...	14 „	„ 12th, „ ...	1 „
„ 20th, „ ...	9 „	„ 13th, „ ...	1 „
„ 21st, „ ...	12 „	„ 16th, „ ...	1 „
„ 22nd, „ ...	15 „	„ 17th, „ ...	1 „
„ 23rd, „ ...	7 „	„ 19th, „ ...	2 „
„ 24th, „ ...	7 „	„ 20th, „ ...	2 „
„ 25th, „ ...	3 „	„ 27th, „ ...	2 „
„ 26th, „ ...	4 „	„ 28th, „ ...	1 „
„ 27th, „ ...	3 „	„ 29th, „ ...	2 „
„ 28th, „ ...	2 „	„ 31st, „ ...	1 „
„ 29th, „ ...	1 „		
„ 30th, „ ...	1 „	Total ...	166 cases.
Dec. 1st, „ ...	1 „		
„ 2nd, „ ...	1 „		

Ages of cases notified from January 1st to October 31st, 1910:—

Years.		Years.	
10 — 15 ...	3 cases	60 — 65 ...	1 case
15 — 20 ...	3 „		
25 — 30 ...	1 „	Total ...	14
30 — 35 ...	2 „		
35 — 40 ...	4 „		

On November 13th the district was practically free from Enteric Fever. It is true that one case which had been notified as Scarlet Fever was subsequently notified as Enteric Fever with a negative result. On November 14th two cases of Enteric Fever were notified, November 15th one case, November 16th eleven cases. Your Medical Officer then began to consider that an epidemic was starting. Dr. Spink called at the office on the morning of the 16th and informed me that there was an epidemic at the Lower Cross of peculiar nature, which he described as Influenza with Typhoid symptoms. We went together and saw four cases, and took blood specimens from them all. These we sent in by special messenger to Prof. Delépine; they gave positive results. On the 17th twenty-four further cases were notified. The ages of the cases were mostly under 15, as will be seen upon reference to the following table:—

AGES.—In age groups the cases are as follows :—

Under 5 years	...	...	17 cases.
Between 5 and 15 years	...		82 „
„ 15 and 25 years	...		48 „
„ 25 and 65 years	...		19 „
Total	...		<u>166 „</u>

SEX.—Of these again 89 were males and 77 females.

Enquiries were immediately started with a view to ascertain the cause of the epidemic. The water was beyond suspicion, being Manchester water, and we knew that if it was due to the water both Manchester and Salford would have been affected. In order to make assurance doubly sure, a specimen of the water was taken from the lowest point and sent to Professor Delepine. The result of the analysis was as we expected, and is shown in the appendix. A few enquiries satisfied us that there was nothing in the milk supply, as the supply was distributed over all the milksellers in the district. We turned our attention, seeing that all the cases were children, to ice cream. The results were very disappointing and in only three out of the then notified cases could we find the history of ice cream, as the children denied having consumed this article. Others have since acknowledged that they had done so, because their parents had forbidden them to purchase it. One boy in Tomlinson Street has since admitted that he stole a penny with which he purchased the ice cream. Seeing that the cases were practically all children we had to direct our attention to some article common to children, and we could exclude watercress, tripe and all forms of uncooked food. There had been no school entertainment. Enquiry into sweets found the history of these in practically every case. We made extensive enquiries into sweets on the chance of finding some common wholesale supply, the possibility being that some packer who was a typhoid carrier had contaminated the cooked sweets. This we could not tie up. On November 17th, the Medical Officer called on the Chairman. We discussed the matter at length and decided to call a special meeting of the Health Committee, for November 19th. In the meantime we were able to exclude any infection from drains, all the cases reported hitherto, with the exception of two, being from water-closeted houses, and in new property, with new drains.

The Committee met on November 18th, and discussed the matter, and it was decided to appoint a special Sub-Committee to interview the Chairman of the Salford Health Committee, as we had exceeded our

accommodation for isolation in the Sanatorium. On November 18th the Medical Officer received information from Dr. Hutchinson, Assistant to the M.O.H. of Manchester, and Professor Delépine that there was an epidemic of Enteric Fever existing in Manchester due to ice cream. On Friday, November 18th, your M.O.H. telegraphed to the L.G.B. that a serious epidemic of Enteric Fever had occurred in Eccles. On Friday afternoon he received a telegram from Dr. Copeman saying that he was coming to Eccles on Saturday morning. On Saturday morning the Sub-Committee, consisting of the Chairman, Vice-Chairman and the Mayor interviewed the Chairman of the Salford Health Committee who promised to give us every assistance, to open a fresh block of wards, and if the worst came to the worst, to hand over the hospital in Drinkwater Park to us. Alderman Huddart, Chairman of the Salford Health Committee, assured us that Salford would do everything in their power to assist us. Dr. Copeman arrived on the 19th, and inquired into the epidemic. In company of the Medical Officer he visited several cases and came to the conclusion that the epidemic was due to ice cream.

A further special meeting of the committee was held on Saturday, the 19th, when Dr. Copeman interviewed the Committee.

The policy pursued by your Medical Officer was, every case was visited on the day of notification, and every effort was made to get the cases removed to the Sanatorium. The work of disinfection of infected rooms was completed on the same day as removals to the hospital were effected. Special typhoid pails were supplied in all cases nursed at home, and special leaflets (given in the appendix) left at each house.

The drains and water-closets of every house in which a case occurred were disinfected by the application of "Chloros," and similar measures were adopted in the case of four Public Elementary Schools in which pupils were affected. The privies of the two affected houses were cleansed and thoroughly disinfected. The policy we adopted was to get every case into the Sanatorium as quickly as possible so as to avoid secondary cases. Two ice cream vendors were warned off the Cross on Saturday, the 19th, and samples of the ice cream taken, and forwarded to the laboratory for analysis, the results of the analysis were negative. By the kindness of the Police Superintendent, policemen were placed at each entrance to the Borough with instructions to turn back all ice cream vendors. The same policy was adopted on Sunday. Special enquiries on a special form were made into the cases, when it was found, that practically all the cases had consumed ice cream from an Italian vendor, popularly known as "Antonio." Further

enquiries led us to believe that there were two vendors concerned, if not three, namely:—Peter, Vincenzo and David. Take the latter first, we made further enquiries into David's round. Through the kindness of Dr. Tattersall blood specimens were taken from David and his son, with negative results. I shall refer to Peter and Vincenzo later on.

CLINICAL SYMPTOMS. Sudden onset with rigor, probably seventh day of illness, sore throat, in some cases vomiting. Enlarged spleen—in one case seen with Dr. Spink, we could feel the notch in the spleen: not much tympanitis, in many cases marked somnolence. Rose spots were present at the junction of the thorax and abdomen in 75% of the cases. The tongue was peculiar: it was yellow on both sides with a glazed track in the centre. Delirium was frequent. Diarrhoea absent. Headache and pain in limbs. Rapid pulse. Influenza symptoms.

On November 20th Dr. Copeman made further enquiries and satisfied himself that the epidemic was entirely due to ice cream, and here I should like to say what great assistance and support we received from Dr. Copeman, and further the promptitude with which the L.G.B. acted when I appealed to them for assistance. As a result of Dr. Copeman's enquiries on November 20th, that the epidemic was due to ice cream was established beyond question, the Health Committee, acting on the suggestion of Dr. Copeman, asked Salford Health Committee for the assistance of two inspectors. These inspectors visited 2,269 houses and found 30 cases of disease, nine of which were found to be Enteric Fever. The Committee also appointed Dr. Ward, from the Public Health Laboratory in Manchester, to assist the Medical Officer. His assistance was very valuable.

The Medical Practitioners in the district gave your Medical Officer every assistance. Blood specimens were taken from the great majority of cases as reference to the chart opposite will show.

The Chairman of the Health Committee was assiduous in his attention, he visited the Health Office at least twice a day, and gave us valuable assistance by his advice and support. Twenty-one cases of suspicious sickness were notified by schoolmasters, and in one case your Medical Officer found a child with a temperature of 103°, headache and sore throat. He took a blood specimen which proved +. As an instance of the source from which infection occurred, at 109 Ellesmere Street, eight children, three of which ate ice cream from "Antonio," all contracted the disease, the other five escaped. A further instance occurred in the case of a nurse girl to an actress at the Crown Theatre. This girl, aged fifteen (W.W.), had eaten ice cream a fortnight previously at Openshaw,

where I am given to understand there was a small epidemic due to ice cream. The examination of her blood proved positive. This case should be deducted from our epidemic, but links us up with the Manchester epidemic. Two children at the Lodge at the Sanatorium, sickened on the 9th and 14th December respectively. These have to be added to our epidemic. A girl, A.K., of Chorley Road, Swinton, purchased two $\frac{1}{2}$ d. cups of ice cream on Sunday afternoon, October 23rd, in Ellesmere Street. She developed Enteric Fever. These three cases should be added to our epidemic. Dr. Sergeant, the Medical Officer of Health for the County of Lancashire, visited the district, and made enquiries and expressed full satisfaction of the methods we were adopting. Seventy-two contacts were excluded from school for fourteen days.

On November 22nd, at Eccles Parish School there were twenty-seven cases of actual disease and many contacts. The Committee deemed it advisable to close this School for fourteen days, owing to the fact that the closets were common, not from any sanitary defect in the School. Of the seventy-two excluded children, five subsequently developed Enteric: it will thus be seen that the action of closing the School was justified, as there was a danger of the closets being contaminated, and the possibility of a child putting its hand on the contaminated seat of the closet and eating his food, thereby contracting the disease.

Sweets, etc., were removed for destruction from the following places, owing to a case having occurred amongst the members of the family:—
No, 11 King Street.

„ 27 „ „
„ 16 Regent Street.

MILK.—One case occurred in a small shop where a small quantity of milk was sold. At the time of visit there was about a quart in the shop. This was removed from the shop by the occupier, and boiled for the use of the patient who was afterwards removed to the hospital.

Examinations of sewers in all the affected streets were made.

On December 7th, Dr. Copeman again visited the district and remained till Sunday, as on his previous visit he interviewed the M.O.H. of Manchester, and gave him full particulars of the Eccles epidemic up-to-date.

We interviewed P. and V., the two Italian vendors of ice cream, from Ancoats, on December the 9th, as our enquiries had by this time definitely fixed the cause of the epidemic to ice cream, manufactured in

the Ancoats district of Manchester. I wrote to V. asking him to see me at the Town Hall, at 9-30. He came down and I interviewed him, and afterwards sent one of my inspectors round with him to see his route. The route he took only corresponded with part of the affected area. He agreed to bring his brother P. down in the afternoon. P. was accompanied on his route by the Chief Sanitary Inspector, Mr. Laskey. V's route, as shown on the map, was as follows:—Eccles Old Road, John William Street, Monton Lane, Renshaw Street, Ellesmere Street, Barlow Street, Green Lane, Lincoln Street, Athol Street, Egerton Street and Hampson Street. P's route was:—Eccles New Road, first call Sanatorium, St. Mary's Street, Fox Street, Birch Square, College Croft, Tomlinson Street and streets off Tomlinson Street, Ellesmere Street and Renshaw Street. We interviewed the first two of them at my office, and found that both had sold on October 23rd on their separate routes. On October 24th, P. went to Italy to see his mother, and returned on November 20th because his wife was ill of Enteric Fever. V. took his round on October 30th.

Sixty-nine cases were infected on Oct 23rd, the remainder on Oct. 30th. We ascertained that the house in which the ice cream was made is a three storied one, the two upper floors of which are used for lodgings. It is tenanted by P., V., P's wife and son, Mrs. V. and five children. There are five principals making ice cream in the two bottom rooms. The ice cream place is the whole of the ground floor; it is divided into a front boiling room and a back cooling room. There are fourteen people resident in this house, six of whom gave a typhoid reaction. There is one common closet on the first floor. They make on Thursday for Saturday, and Friday for Sunday. The order of making is P. first, at 10-30; V. second; M. third and C. fourth. On October 22nd V. made first and M. second. The method of manufacture is as follows:—The ingredients used are cornflour, milk, sugar and salt; the milk is used shortly after it is received from the milkman, it is poured into a copper bottom vessel which is placed on a gas ring while it is boiling. They make a paste of cornflour and milk, which is stirred round with a wooden spoon. As the milk becomes warm the paste of cornflour is added and stirred up as quickly as possible, the white sugar being added from a paper bag. The mixture is kept stirred with the wooden spoon, which they use in common for thirty minutes until the top becomes wavy. The mixture is then removed to the freezing room and poured into a zinc cylindrical freezer. It is a matter of interest to inquire what was the origin of infection in this house. That the infection is due to the house there can be no doubt. The M.O.H. of Manchester attributes the

contamination to M., but from information we received from the brothers, I am more inclined to attribute the infection to the V's.

Their Medical Attendant states that Mrs. V. and five children returned from Italy on September 17th. She brought M. to his surgery on September 24th. M. had been ill two or three days. The Dr. diagnosed gastro-intestinal catarrh. Mrs. V. said she herself felt ill and might as well have a bottle. Dr. Y. prescribed Bismuth, but did not suspect Enteric Fever. October 12th, Dr. Y. says Mrs. V. came to the surgery with Bertini, who had gastric trouble and nothing to raise suspicion. October 17, B. ill. Dr. Y. visited and found Antonio ill with temperature 100°, headache and bronchitis. He saw them again on October 18th, and asked the mother to let him know how the children went on. He heard no more till October 28th, when he took blood of all the family, with — result for Mrs. V., but + for three children; and fourteen days after another blood from father, mother and Maria, all +. There is every probability that these children, living in the house, had gone into the cooling room, and as children will do, probably have a lick, and infected the ice cream which was standing in the freezers alongside of M's. Whether Mrs. V. brought the infection back with her from Italy or not, or whether the ice cream of M., which was known to be infected, was the cause of the contamination of the ice cream sold in Eccles is a matter of doubt, but that the ice cream was contaminated in this building is established beyond question. This leads me to point out that we have no power to deal with ice cream, unless we can prove it to be contaminated. Legislation is needed to give us power to register these ice cream manufacturers, to compel those who manufacture in outside districts to be licensed before they vend their stuff in this Borough, and to insist on frequent bacteriological examinations. On December 10th, I was astonished to learn from Dr. Copeman, who had been to see the M.O.H. of Manchester, that he, the M.O.H., had permitted P. to sell again on December 8th. I received this information at 5-30 p.m., and immediately went over P's round and searched the Cross to see if he was selling there, got the Superintendent of Police to put two constables on duty, but failed to find him. I wrote him the following letter:—

TOWN HALL,

ECCLES, Dec. 10th, 1910.

SIR,

I am to-day informed that you have been again selling ice cream. I hereby give you notice that if you are found selling ice cream in

Eccles until further notice, Police Court proceedings will forthwith be taken against you and severe penalties enforced.

Yours,

M.O.H.

MANCHESTER,

December 11th, 1910.

DR. HAMILTON,

In answer to your letter, I let you know that I went out with the ice cream as I had got permission. But I was told before by Dr. Niven, that I could not come on Eccles, and thanking you very much for letting me know.

Yours truly,

P.

P.S.—But you told me that day when I was at the Town Hall, I would not without your permission.

In the making of ice cream it is essential that personal cleanliness is observed. When I interviewed P. and V., both their hands were absolutely black, finger nails full of black material, their clothing dirty, their hair uncombed and they were generally in a most disagreeable condition.

I have made careful enquiries into all the ice cream sellers in Eccles, and find that none of them have sold since September 17th. I had an enquiry from the Medical Officer of Health of Bury, Dr. Burnett, as to whether there was any Enteric in Eccles; he stated that a soldier at the Wellington Barracks had developed Enteric after he had visited Eccles on October 30th, Wood Street. I informed him that at that time we had well over 100 cases in that immediate district. Three cases were reported anonymously :—one Birch Square, one Thomas Street and one case, 6, Clegg Street, by a rent collector.

The systematic visiting of houses in the effected streets has disclosed many cases of Enteric Fever which would have been unknown. The control by bacteriological examination, and the investigation of cases in which there was no suspicion of Typhoid Fever, have very much enlarged my views as to the pathology and clinical symptoms of the disease. The presence of rose spots, the enlargement of the spleen, the demonstration of the bacillus typhosus in the blood in practically every case—the negative results were mainly in contacts—demonstrate that Typhoid is not, as was formerly thought, simply an intestinal disease, but is a general septic infection. Though admittedly the most

frequent, the lymphatic system of the intestine is not the only portal of entry. In our epidemic we have had many cases of tonsillitis in the beginning of the illness, showing that the lymphatic apparatus of the upper digestive tract may also be the infecting spot. This disease presents many varying types, from sore throat to pneumonia, from a mild gastric catarrh to perforating peritonitis, from a simple headache to meningitis. The recognised symptoms of typhoid abdominalis may be so slightly developed that only a bacteriological examination will demonstrate its presence. Case No. 155 was found by the additional inspectors and reported to the medical staff. The child was visited on November 22nd, and examined, but no symptom was found which would have called for a blood examination. On December 14th a blood specimen was taken, with a + result. The child had been ill for a month with slight diarrhoea. Many of the cases aborted and did not run the full course of the disease. This may have been due to the infection having been, in many cases, only from one dose of the poison. In cases of water or milk infection the patient gets repeated doses, as they drink water many times a day, or they may have been due to the source of infection being from the paratyphoid bacillus. A very interesting observation made in the epidemic was that side by side with severe and typical cases were found cases which eliminate the typhoid bacillus in their excrement for weeks without having a classical symptom of typhoid or even dry symptoms which would point to the disease having been present. In these cases there has existed a reaction of the body tissue against the invading typhoid bacillus. We must, however, regard these cases as "carriers," that is to say they have had Typhoid Fever without clinical symptoms. These cases are of very great importance, especially if they occur in those employed in the handling of food stuffs. It is estimated that they amount to 4%. It is exceptional for children to remain "carriers." Probably 75% of all typhoid carriers are adult women. This of course is due to the fact that they do the cooking for the household, and have not been cleanly in their habits, that is to say, they have not properly washed their hands after having been to the closet, nor cleaned their nails, in this way carrying the bacillus to the food of the other inmates of the house.

During the time the epidemic was at its height the pressure of work in the Health Department was enormous. Mr. Laskey, Mr. Knowles and all the staff worked early and late. Mr. Royle (the Assistant Town Clerk) worked Saturday afternoon and evening, and all day Sunday for us. To all these my thanks are due. I must also thank the Chairman of the Committee for the loyal support accorded to me.

Dr. Copeman (Local Government Board) gave us assistance more valuable than words can describe. His prompt response to my request for assistance; the clearness of his judgment and the readiness with which he placed his vast experience at our service, strengthened our position and restored our confidence. At both his visits to Eccles he worked unceasingly, sparing neither time nor trouble in his efforts to help us. There can be no better instance of the importance of having a Central Authority, like the Local Government Board, than our experience in this epidemic.

Finally, I should like to thank the Medical Practitioners for the trouble they took in taking blood specimens from suspected cases. Although many of the specimens proved negative, the fact that they were being taken to a great extent, lessened the list of cases being overlooked.

On December 28th, I took blood specimens from the recovered patients who resided in shops. Of these four were negative but two proved positive. One of these was an adult employed in the manufacture of sweets, the other a lad whose mother keeps a grocer's shop. The manufacturer of sweets has been informed that he is still infectious and is not to handle food stuffs nor manufacture sweets until further notice. A similar notice has been sent to the other case. They have both been requested to see me on January 31st, when another sample of the blood will be taken. Special typhoid pails have been supplied in each case. Specimens of their excreta and urine have been taken and forwarded to the Public Health Laboratory for examination.

The cases and deaths are as follows :—

	Primary.	Secondary.
Number of cases	158	8
Number of deaths	14	

Form of Enquiry into Enteric Cases.

ENTERIC FEVER. Ward.
 Name of Patient..... Age.....
 Address

Medical Attendant.....First called in.....
 Notified at.....o'clock on the.....19

Condition of Premises.
 House.—New Old (.....) years —Back to back—Good repair—
 Clean—Dry..... Living Rooms.
Bedrooms.Cellars.

Yard.....in good order.....
 Water Closet.—Ventilated and lighted.....Adjoining external wall.....
 Soil Pipe.—Outside house—Inside—Accessible—Ventilated by.....
 inch pipe.
 Privy.—Ashpit.—Ashbin.—Good—Sole use.—Cleared.....
 Sinkstone.—Lavatory.—Bath.—Waste pipes trapped.—
 Disconnected.....

Drains.—Gullies.—Good.....

Water Supply.—Drinking Water.—Public supply.....
 Nuisances near the House.—Piggeries.—Stables.—Cowsheds.—Ditches.—
 Stagnant Water.—Manure, &c.

Other Nuisances :

Milk Supply.....Registered Number.....
 Butcher..... Grocer..... Baker.....

Business carried on in the house.....

Patient.—Isolated in Bedroom.—In Living room.—No Isolation.
 Separate Attendant.—Other duties of Attendant.....
 Previous health of Patient—Good—Fair—Bad.....
 Previous illnesses of Patient.....
 How long resident in house.....
 Recent visits to other houses

Suspected source of infection

Previous Cases of Enteric Fever in the same house (—) in vicinity.
 Nature of other recent cases of illness in the house.....

Pail supplied.....

Date of Inspection

Age. M.F.	Occupation.	Place of Work or School.	E. F.* History.	Date of Onset.	Last at Work or School.	

*A - Have had Enteric Fever.

B—Have not had Enteric Fever.

C—Now ill.

Bedding requiring removal.....

Improvement in Isolation { When effected.....

Nature of.....

Date of Fumigation.....Stripping.....

Bedding removed.....

Termination of Case { Date of Recovery.....

Date of Death.....

Date.....Inspector.

BOROUGH OF ECCLES.

ADDITIONAL ITEMS OF INFORMATION REQUIRED IN CONNECTION
WITH THE REPORTED CASES OF ENTERIC FEVER.

Milk—Quantity purchased daily.....	
do. consumed by patient.....	
Raw,—in puddings,—or only in tea.....	
Name of Retailer	
Names and Addresses of farmers who supply retailer :—	
Ice Cream.—Any consumed by patient.....	
or by other inmates—(Names, if any).....	
Date of purchases.....	
Name and address of vendor	
Shellfish, Watercress, } Consumed by patient.....	
or other raw vegetables } do. other members of household	
(celery, lettuce, }	
tomatoes, &c.) }	
Particulars of purchase }	
of parkin or treacle }	
toffee, with details as to }	
vendors, date of pur- }	
chase, whether consum- }	
ed by patient, &c. }	
Sex of Patient	
Actual date of commencement of illness	
Date of sending blood for examination ...	
Result of such examination	

FORM USED IN HOUSE-TO-HOUSE VISITATION.

BOROUGH OF ECCLES.

There is at present a case of sickness at :—

Address

Name.....

There is no doctor in attendance.

(Signed),

Dated.....

Inspector.

BOROUGH OF ECCLES.

RULES FOR PREVENTING THE SPREAD OF ENTERIC OR TYPHOID FEVER.

Urine and discharges from the bowels should be received in a utensil containing some of the disinfectant. This should be emptied into the sanitary pan, more disinfectant poured on, the lid clamped down, and the pan placed in the yard.

All soiled linen should be steeped for 24 hours in a tub containing some of the disinfectant; enough disinfectant being used to keep the clothes thoroughly moist.

The person who looks after the patient must on no account prepare or handle food for any other person.

No food must be eaten in the sick room except by the patient, and no food once taken into the sick room must be brought out, except to be destroyed.

No person living in a house where there is Enteric or Typhoid Fever must take part in any business necessitating the handling of food.

The attendant's hands should be well washed and the nails scrubbed after touching the patient. It is especially necessary to clean the hands thoroughly before partaking of food.

The patient should be kept scrupulously clean. Rags should be used for cleaning the patient, and afterwards burnt.

All food vessels and utensils should be scalded and cleansed after use.

All clothes must be washed on the premises, and washing must on no account be taken in.

The sick room should be emptied as far as possible of furniture. It should have a fire always burning and be well ventilated; and the floor washed frequently.

The drains should be flushed daily with disinfectant, and the yard and closet kept clean.

Children should be specially cautioned against playing on any unpaved surface, and in the neighbourhood of ashpits and privies.

In case of death the funeral should take place early, and a layer of chloride of lime should be placed in the coffin.

To RESIDENTS,—All milk should be boiled before using and should be covered and stored in a cool place.

Drinking water, as far as possible, should be boiled or filtered.

Ice cream, shell fish, herb beer, and other cheap beverages should be avoided.

Persons feeling ill or out of sorts, especially if attacked by Diarrhœa or Sore Throat, should at once consult a medical man.

Information should be sent to the Health Office as soon as the medical attendant has certified that the patient is well.

The room or rooms will then be disinfected by the Health Department, and afterwards the whole house should be thoroughly cleansed.

N.B.—Disinfectants may be obtained FREE OF COST at the Health Office, Town Hall, Eccles.

W. M. HAMILTON,
Medical Officer of Health.

Copy of Placard posted through the Infected Area.

BOROUGH OF ECCLES.

WARNING.

The epidemic of this disease now prevailing in certain parts of the Borough, has been definitely traced to the eating of ICE CREAM.

 THERE IS NO DANGER OF INFECTION FROM
ANY OTHER SOURCE.

The Health Committee warn you

NOT TO EAT ICE CREAM.

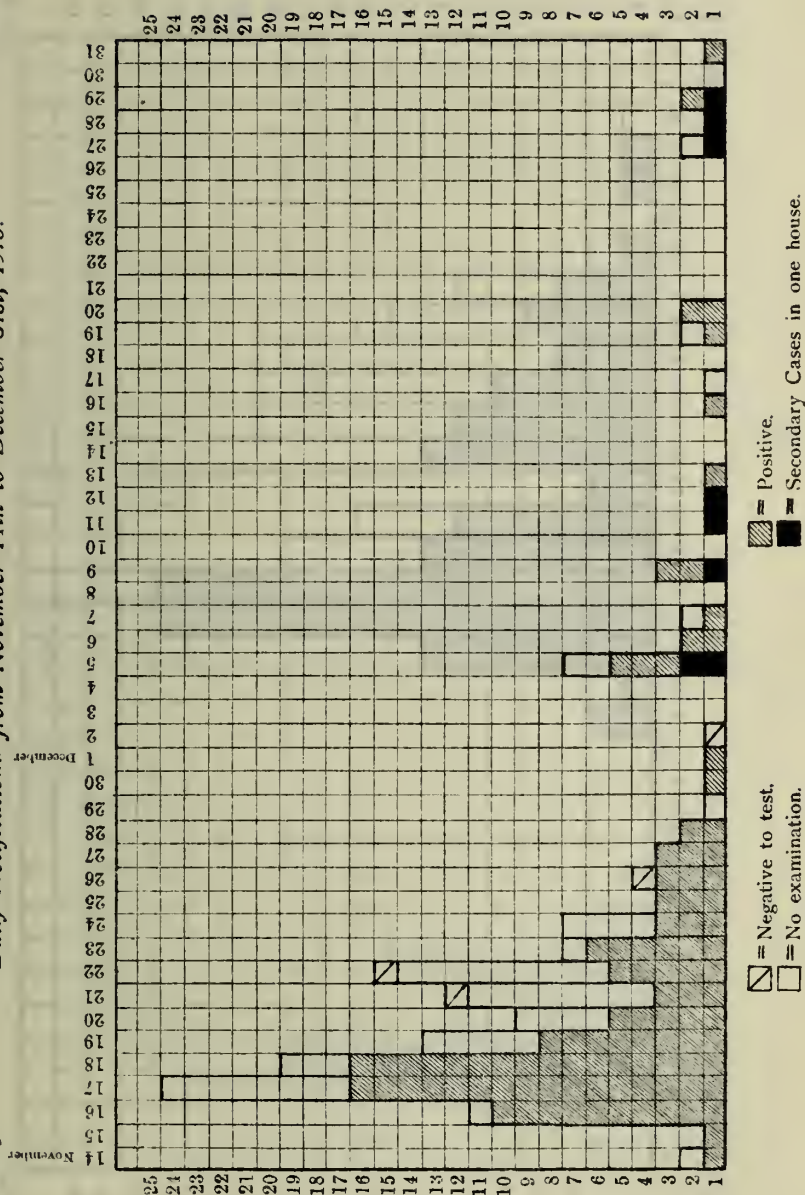
W. M. HAMILTON, M.D.,

Medical Officer of Health.

CHART No. 1.

ENTERIC FEVER.

Daily Notifications from November 14th to December 31st, 1910.



1. ON PAPER

2. 1/2 1/2 1/2 1/2 1/2

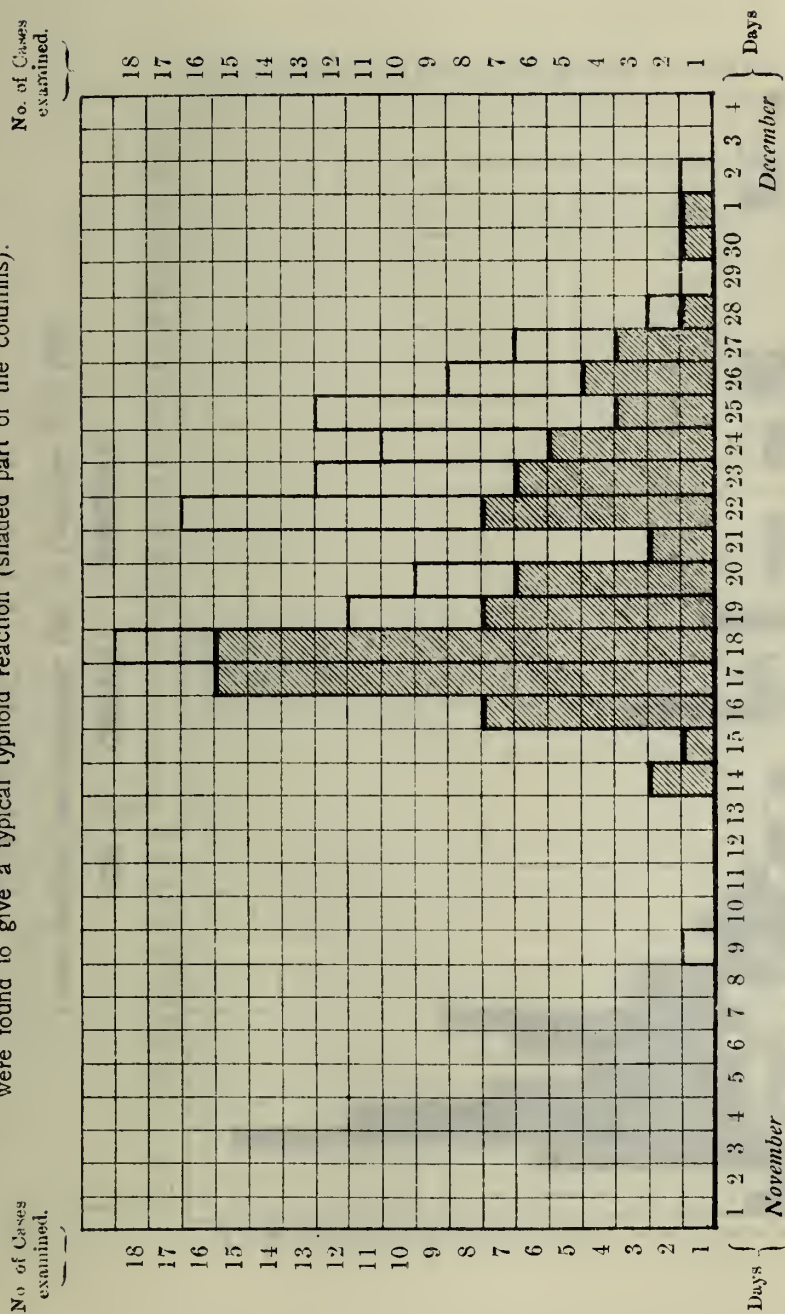
Top row of the grid is the same as the bottom row of the grid.



1. 1/2 1/2 1/2 1/2 1/2

2. 1/2 1/2 1/2 1/2 1/2

Diagram showing the number of Cases examined bacteriologically (Widal's reaction) during the month of November and the first four days of December, and the number of Cases which were found to give a typical typhoid reaction (shaded part of the columns).



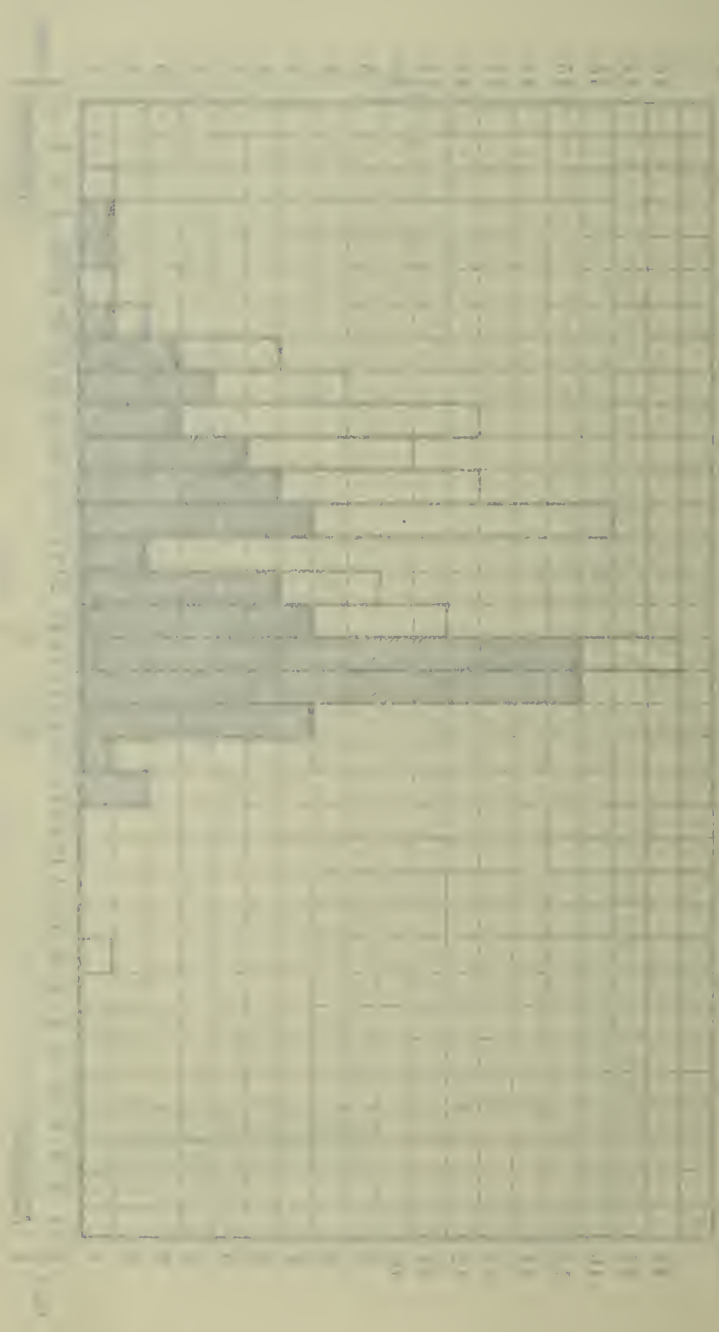


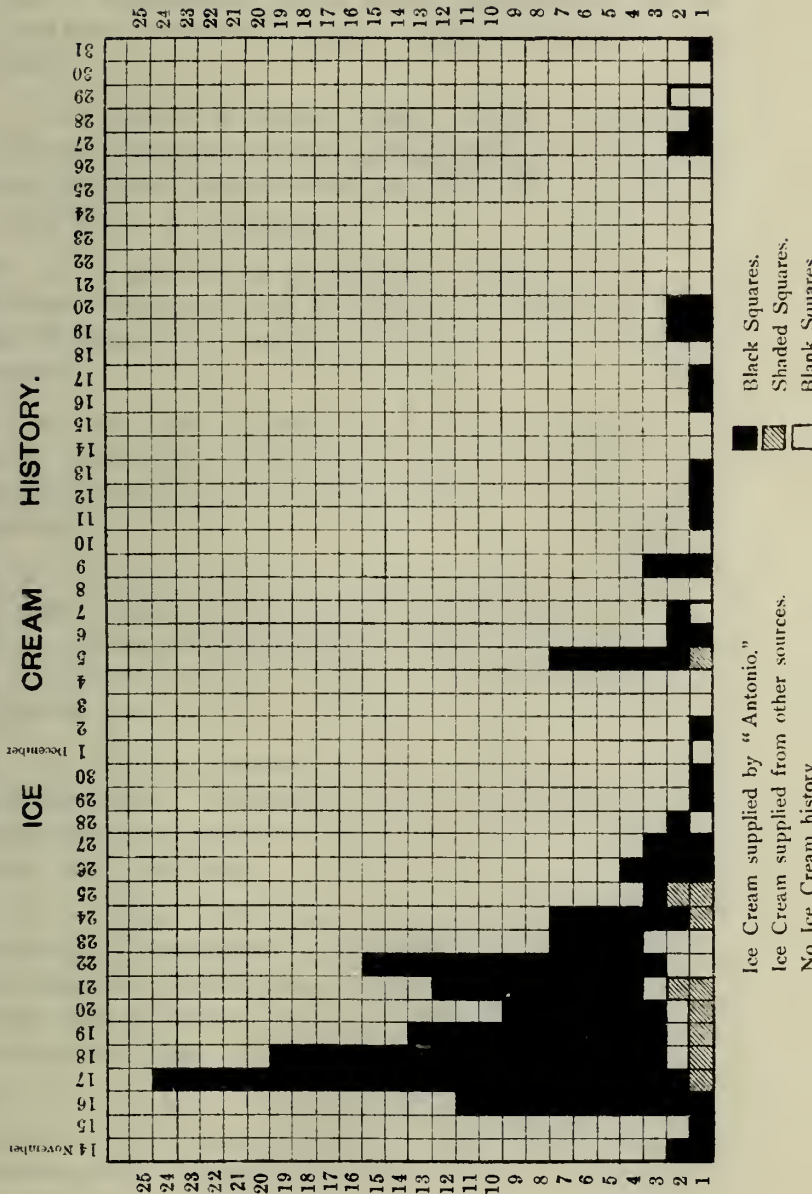
FIG. 1. Distribution of 916 specimens of *Staphylinidae* collected from the forest floor in the vicinity of the village of *St. Petersburg*, 1910-1911.

The results of the examination of the specimens of *Staphylinidae* collected from the forest floor in the vicinity of the village of *St. Petersburg*, 1910-1911, are given in the following table.

CHART No. 2.

ENTERIC FEVER.

Cases Notified from November 14th to December 31st, 1910.



1910 (1st Census, page 12)

1910 (1st Census, page 12)
 1910 (1st Census, page 12)
 1910 (1st Census, page 12)



ICE CHEM HISTOR

1910 (1st Census, page 12)

1910 (1st Census, page 12)

CHART No. 5

The following is a brief account of the cases of Enteric Fever occurring during the year 1910, prior to November. It will be noticed that the cases are of a sporadic nature, only in two instances was there direct contact. There was no common milk or food supply and only in two cases was there a history of shell fish. All the houses affected were water-closeted.

K.C. F. 31 years, 19 Garden Street Notified January 6th. Nursed at home. Commenced to be ill on December 25th. Partook of some pork on December 25th and was afterwards unwell. Yard in good order. Water closet. Dwelling-house. Recovered.

M.M. F. 39 years, 55 St. James Street Notified January 6th. nursed at home. Commenced to be ill December 30th. Partook of some oysters on December 25th. Yard in good order Waste water closet. Dwelling-house. Died.

H.R. M. 19 years, 44 The Park. Notified January 13th. Removed to Sanatorium. Commenced to be ill December 30th. Source of infection not known. Yard in good order. Water closet. Dwelling-house. Recovered.

A.G. F. 18 years, 23 Charlton Avenue. Notified January 16th. Removed to Sanatorium. Commenced to be ill January 7th. The doctor was called in and diagnosed Pneumonia. Enteric Fever developed on the 16th. Infection not known. Waste water closet. Yard in good order. Dwelling-house. Recovered.

W.V. M. 39 years, 33 Ellesmere Street. Notified January 25th. Removed to Sanatorium. Commenced to be ill on December 25th with a cold and partook of some oysters on January 16th. Yard in good order. Water closet. Dwelling-house. Died.

J.D. M. 27 years, 41 St. James Street. notified January 26th. Went into Salford Royal Hospital. Commenced to be ill January 11th. Source of infection not known (sister of patient, Mrs. Melling, 55 St. James Street, died of Enteric Fever two weeks ago). Yard in good order. Waste water closet. Dwelling-house. Died.

T.D. M. 14 years, 31 Davies Street. Notified February 7th. Nursed at home. Commenced to be ill three weeks ago but recovered and broke down again. Source of infection not known. Yard in good order. Dwelling-house. Water closet. Recovered.

E.L. F. 14 years, 528 Liverpool Road. Notified February 12th. Removed to Sanatorium. Commenced to be ill two weeks ago with

headache. Source of infection not known. Yard in good order. Water closet. Dwelling-house. Recovered.

E.A. F. 11 years, 62 St. James Street. Notified March 15th. Removed to Sanatorium. Commenced to be ill March 4th. Patient's father had a bad attack of Diarrhœa for about a week, five weeks ago. Source of infection not known. Yard in good order. Water closet. Recovered.

A. M. 40 years, 62 St. James Street. Notified March 17th. Nursed at home (ambulatory case). The patient had a bad attack of Diarrhœa five weeks ago, and a specimen of blood on the 15th instant gave a positive reaction. For particulars see previous case. Recovered.

A.B. F. 15 years, 13 Green Lane. Notified April 5th. Removed to Sanatorium. Commenced to be ill March 29th. Source of infection not known. Yard in good order. Water closet. Bird shop and stores. Recovered.

S.H. M. 64 years, 136 Parrin Lane. Notified May 9th. Nursed at home. Commenced to be ill April 22nd, with Rheumatic Fever. Source of infection not known. Yard in good order. Water closet. dwelling house. Died.

D.R. M. 35 years, 31 Trafford Road. Notified October 17th. Removed to Sanatorium. Commenced to be ill on the 9th instant, with sickness and diarrhœa. Partook of some pork on the 8th instant and some herb beer four weeks ago. Source of infection not known. Yard in good order. Water closet. Dwelling-house. Died.

J.R. M. 30 years, 10 King Street. Notified October 22nd. Was removed to the Salford Royal Hospital as suffering from Appendicitis, 14th instant. On the 22nd instant the Salford Authorities notified us that the patient was suffering from Enteric Fever. Source of infection not known. Had Enteric Fever 19 years ago. Yard in good order. Waste water closet. Dwelling-house. Died.

Age incidence.	WARDS.							
	M.	F.	Barton.	Eccles.	Irwell.	Monton.	Patricroft.	Winton.
1—5								
5—10								
10—15	1	2			2			1
15—20	1	2				1	2	
20—25								
25—30	1				1			
30—35	1	1			2			
35—40	2	1			2		1	
40—45	1				1			
60—65	1							1
Total ...	8	6			8	1	3	2

SECTION V.

School Medical Inspection.

As will be seen from the statistical summary of work done, a very large amount of School Medical Inspection was carried out during the year. When it is pointed out to the Committee that, owing to the epidemic of Enteric Fever, November and December were practically blank months; that the pressure of Health work prevented your Medical Officer from doing anything except Enteric Fever investigation the amount of School Inspection done was very large. 1489 new admissions were examined. Of these 816 were found to be normal. The method of examination has been outlined in a previous report. In addition to these, 225 children aged 13 have been examined. This brings the total of examinations to 1714,

It is gratifying to report that nearly 1000 parents were present at the examinations.

We notify the parents of (a) the infants on first admission; (b) children of seven years of age going up to the Mixed Department; (c) thirteen to fourteen about to leave school. The parents take the greatest interest in the examinations. In the case of the "leavers" (13—14) I always enquire what the boy or girl is going to do after leaving school, *e.g.*, whether having a trade, going into an office, serving apprentice to dressmaking or millinery, or going into the mill. One of the most fertile causes of unemployment is the practice of letting the boys go as errand boys, newspaper sellers or milk boys. I take every opportunity of impressing on the parents (if present) and on the boys that they must learn a trade if they wish to become useful citizens. The temptation to get an immediate return from the child in the wage of five or six shillings a week comes in the employment of milk or errand boys, is apt to bear weight with the careless parent. We have many of these. Many parents think that their responsibility for the child ends with the conclusion of its school life; that they have done sufficient in bringing the child into the world and feeding it (and in many cases only partially clothing it), during its school life.

One very gratifying result of the school work is found in the number of verminous heads cleansed during the year. *All* cases with "nits" in the hair are classified as Verminous. It stands to reason

that the eggs (nits) can only come from a pre-existing louse. In ten days the nits will hatch and the head will be full of vermin. Several parents have objected to this procedure stating that there is nothing alive in the child's head. One parent became very abusive on this question. During the year 219 verminous heads were discovered. Of these 185 have been cured; seven are improved under treatment; two are unchanged, and 13 have left school and gone to other districts.

The procedure in the case of these verminous heads is (a) on discovery the parent is written to on the accompanying form:—

BOROUGH OF ECCLES EDUCATION COMMITTEE.

TOWN HALL,

ECCLES19

To the Parent or Guardian of.....

School..... Admission No.....

I have to-day examined this child and find h Verminous. The hair **must** be cut. To destroy lice and nits, the hair should be kept wet with paraffin oil for several hours and then washed with soft soap and water; the same should be done next day and the day after, care being always taken **not** to bring a naked light near the paraffin oil; then the hair should be combed daily with a very fine comb soaked in vinegar till no more nits can be found. Children should not in any case exchange hats or caps, and at night should wear a nightcap to prevent further infection.


W. M. HAMILTON, M.D., D.P.H.

I have read the notice from School and will at once carry out the advice given.

Signed

..... Address.....

..... Date

 To be returned to the Principal Teacher of the above School.

(b) On the Saturday following the parent is summoned to bring the child at 9.30 a.m. to my office at the Town Hall. In most cases this results in the child being cleansed as the Police Court appears to the parent to be the next step.

(c) If the child is not found to be satisfactorily cleansed on the first visit to the Town Hall, a second appearance is required on the following Saturday. If there is no appearance, or if the child has not been

attended to, the parents are summoned to appear before the Committee at its next meeting.

I consider that if Medical Inspection had done nothing else than cause the cleansing of the dirty children, its inception is justified. It is impossible for a child to grow up with any sense of self-respect if its head and body are infested with lice.

The same procedure is adopted in the cases of defective vision discovered. The Committee provide glasses in all cases in which, after enquiry by the School Attendance Officers, they are satisfied that the parents cannot afford to buy them. During the year twenty-five applications for glasses have been granted. As education of a child can only be effected by the eye and the ear, it is only right that every child should have a fair chance of equipping itself for the battle of life.

Strenuous efforts, in which the teachers have loyally backed me up, have been made to get all the girls to tie their hair in two plaits. This practice has become almost universal in the Mixed Departments. The advantages of this procedure are that the girls look neater and tidier, and that they are less liable to infection from "Pediculi."

The following table shews the number of defective children found in the different schools and their subsequent history:—

			Total No. of defectiv's for each Dept.	Total number cured.	Total Number under treatment.	Total number unchanged	Total number left.	Total number not reported upon.
All Saints' R.C.	...	M.	25	18	—	2	4	1
do.	...	I.	15	6	2	3	2	2
Barton Wesleyan	...	M.	9	7	1	—	—	1
do.	...	I.	6	5	1	—	—	—
Beech Street	...	Sen.	10	3	1	1	2	3
do.	...	Jun.	15	8	1	3	—	3
do.	...	I.	66	30	7	13	5	11
Clarendon Road	...	M.	36	23	4	9	—	—
do.	...	I.	28	9	6	9	—	4
Eccles Parish	...	M.	42	29	3	6	4	—
do.	...	I.	48	19	2	11	8	8
Godfrey Ermen Meml.	...	M.	42	23	3	6	4	6
do.	...	I.	33	14	—	7	7	5
Green Lane	...	...	6	2	—	2	2	—
Holy Cross R.C.	...	M.	33	14	—	7	7	5
do.	...	I.	19	9	1	3	3	3
Lewis Street	...	Sen.	33	21	5	4	3	—
do.	...	Jun.	35	22	—	8	2	3
do.	...	I.	94	53	3	14	8	16
Monton Day	...	M.	20	14	2	4	—	—
do.	...	I.	16	8	1	4	3	—
Patricroft C.E.	...	M.	41	23	3	4	3	8
do.	...	I.	43	17	3	8	8	7
Peel Green	...	M.	13	9	2	—	1	1
Eccles St. Andrew's	...	M.	46	29	3	4	4	6
do.	...	I.	43	18	3	13	4	5
Monton St. Andrew's	...	M.	10	7	—	1	—	2
do.	...	I.	16	4	—	4	3	5
St. Mark's	...	M.	5	3	—	1	1	—
do.	...	I.	26	15	4	4	2	1
St. Mary's R.C.	...	M.	37	26	2	6	1	2
do.	...	I.	29	9	3	8	—	9
St. Michael's	...	M.	23	16	2	2	2	1
do....	...	I.	30	15	3	5	2	5
			993	528	71	176	95	*123

*Under School Medical Officer's observations.

Extract from April Report—

“I regret to inform the Committee that we are starting with what may prove to be a serious epidemic of Measles. After consultation with Mr. Neave the following closures, in accordance with the Memorandum of the Board of Education and the Local Government Board, have been ordered:—(1) Clarendon Road—Class in Infants' Department closed from March 13th to 19th. No further cases have developed here. The children come from good homes to this school and the parents realising the importance of the closure evidently kept the children isolated at home. (2) St. Michael's (Mixed Department), the affected class in this school was closed on March 21st, the ninth day from the sickening of the first case, for five days. This brought us to the Easter Holidays. During the holidays the school premises were thoroughly disinfected. The school re-opened on April 4th; next day 16 cases of Measles were notified from the Infants' Department. I visited the school at once and inspected all the children in the Infants' Department, I also instructed the teachers in the symptoms of Measles. As such a large number of children were affected I did not think it of any use to close the Department. I again visited the school on Monday the 11th, and am pleased to report no further cases have developed. These 16 cases evidently were infected during the holidays, (3) St. Andrew's, Eccles (Infants Department), and All Saints'. From both these schools a number of cases were notified. I visited St. Andrew's at once and inspected the children. In both cases I came to the conclusion that as the nine days from the sickening of the first child had passed, closure would be of no avail. (4) Monton St. Andrew's. The Infants' Department in this school has been closed from Monday, April 11th to 15th. (5) Lewis Street (Infants' Department). As four of the six classes in this school were affected, after consultation with Mr. Neave, I closed the whole department from April 11th to 16th.

I have caused a warning placard re Measles to be posted throughout the Borough. Cases of Whooping Cough are also being notified from Clarendon Road School.

At the Meeting of the Council of the Society of Medical Officers of Health, held in London last Friday, it was unanimously resolved to petition the Board of Education to re-instate paragraph 101*. This paragraph, which was in the Code up to 1904, allowed the payment of Grant for children excluded by the Medical Officer of Health for infectious diseases. I would suggest to the Committee that a similar course be adopted and a resolution to that effect passed and forwarded to the Board.

The annual cleansing of the house gullies ordered by the Health Committee have been commenced. The yard drains, gullies, W.C's and urinals of the schools are included in this, as are also the gullies in front of the schools. After clearing out the sediment the gullies are flushed with chloros. The work was proceeding during my visit yesterday at All Saints' School. I kept the work under observation and can report that it was most thoroughly carried out. The yard being unpaved a very large amount of deposit was removed."

Extract from May Report—

"On Tuesday, May the 10th, I discovered a child with a temperature of 100° at the Clarendon Road School (Infants' Department), and to all appearance the child is starting with Measles. I sent the child home with a note asking the mother to put the child to bed at once, and send for her own Doctor.

The class closure on the 9th day for five days recommended by the joint memorandum from the Local Government Board and the Board of Education has on the whole worked well. It undoubtedly stopped the epidemic in Clarendon Road, Monton St. Andrew's and Lewis Street Schools. The history of the epidemic is as follows :—

Date of Report of First Case.	School.		Closed.	
Nov. 9, 1909.....	Godfrey Ermen Mem. I.	Measles	9th Nov. to 13th Nov. ...	} Inclusive.
Nov. 18, 1909.....	St. Mark's	do.	19th Nov. to 23rd Nov....	
Feb. 24, 1910.....	Eccles St. Andrew's I. ...	do.	27th Feb. to 3rd Mar. ...	
Mar. 9, 1910.....	Clarendon Road I.....	do.	14th Mar. to 18th Mar....	
Mar. 15, 1910.....	St. Michaels M.	do.	21st Mar. to 25th Mar. ...	
April 7, 1910.....	Monton St. Andrew's I.	do.	11th April to 15th April...	
April 7, 1910.....	Lewis Street I.	do.	11th April to 16th April...	
April 25, 1910.....	Patricroft C.E. I.	do.	2nd May to 6th May	

I have kept each affected school under observation and have paid frequent visits to them. In each case I have instructed the teachers in the early symptoms of the disease—running eyes and nose, cough, flushed face, headache, etc., and have asked them to exclude any child so affected."

Extract from June Report—

"I regret to report that Measles is still epidemic in a severe form. The notifications from the schools for the month were :—

Lewis Street	39
Clarendon Road	24
Patricroft C. of E.	22
Monton Day	17
Eccles Parish	10
Godfrey Ermen Memorial	2

The epidemic has not been typical. A leading Practitioner has pointed out to me that the course of the disease has been most irregular: for example, a case will sicken and have a high temperature; this will last for two or three days and then go down to normal, no rash will appear until a period varying from the 8th to the 16th day, the rash should appear on the 4th day.

I regret to state that 12 deaths have occurred from this disease, principally from its complications due to neglect.

Monton Day School (Infants' Department) was closed on May 30th for five days, *i.e.* the ninth day after the appearance of the first case. This action is in accordance with the Memorandum from the Board of Education. All the schools mentioned above, except Eccles Parish, had been closed in accordance with the Memorandum.

It is too soon to judge of the effect of the short class closure advocated by the Board, but it seems to me that in Clarendon Road, Lewis Street and Patricroft C. of E. the epidemic, which was apparently checked, was only postponed. Special inspections for Measles and Whooping Cough have been made at Eccles Parish and Lewis Street."

Extract from November Report—

"At Holy Cross School on Friday, the 14th of October, I found a child named Sarah Liddle with a very verminous head and covered with body lice. I excluded her and sent full instructions as to her treatment. I had her clothing and bed clothes disinfected at the Sewage Farm. On the Monday following I had her at my office and found her perfectly clean, her hair cut and cleansed, her body clean and wearing clean clothes.

At St. Michael's I found a child named Mabel Smith suffering from Mitral Stenosis following Scarlet Fever. As her heart was bad and she had a considerable amount of Oedema of the feet I excluded her: she is under Medical treatment. I found a child named Harold Higginbottom at St. Andrew's, Eccles, suffering from Erysipelas of the face. He was excluded. The disease was slight but infectious.

Many cases of Ringworm are in such a condition that it is not possible to determine if they are infectious or not. To clear this matter up I have been making bacteriological examinations of the hair in doubtful cases. One case from Beech Street School shewed a typical growth of the *microsporon audouini* under the microscope. This child was excluded. The other cases failed to show any spores and were allowed to remain in school,

The *microsporon audouini* is a fungus, the mycelial filaments of which, occupy the interior of the hair while the spores form a greyish-white sheath outside the hair spreading along for $\frac{1}{4}$ inch from the mouth of the hair follicle."

Extract from May Report—

"Two very severe cases of Scabies were discovered at Godfrey Ermen Memorial School. They were both excluded and I am pleased to say, were much better when I saw them at the Town Hall on Saturday, May 7th. Several cases of *Impetigo contagiosa* have been discovered and excluded."

Extract from June Report—

WHOOPING COUGH. "This disease has appeared at Lewis Street, Patricroft C. of E., Eccles Parish, and in a less degree at Godfrey Ermen Memorial. There were three deaths from this disease during the month. Following the instructions of the Memorandum we treated this disease on the same lines as Measles."

Number of cases of Measles from School register 393.

Every case of Measles (and all other cases of infectious disease) is visited by one of the Sanitary Inspectors, and the leaflet given below is left at the house.

BOROUGH OF ECCLES.

MEASLES.

This Disease is again prevalent in the Borough, and already several deaths have occurred from it.

There are more deaths every year from Measles than from Scarlet Fever. The disease is most fatal in the Winter and Spring owing to the neglect and carelessness of the parents in allowing the child to run about out of doors, before or after the rash, under the mistaken idea that the disease is not dangerous.

Put the child at once to bed, and take the same care and precautions as you would with Scarlet Fever, and you may save your children,

MEASLES IS A FEVER.

The disease begins like a cold in the head, with dry cough, running from the nose and eyes. The child is poorly and slightly feverish at night. After four days the rash comes out, generally first on the face or behind the ears. The rash remains out three or four days, and then fades. Usually as the rash fades the cough gets worse, and this is the most frequent time for complications such as Bronchitis, Pneumonia, and other Chest Diseases DUE TO COLD, to develop. The child should be kept in bed until the cough has disappeared. If the eyes are very red, keep the child in the dark.

Isolate the child as soon as the early symptoms—cough, running at the nose and eyes, feverishness—are perceived. The disease is most infectious during this stage, but it is also infectious for fourteen days after the rash has appeared; therefore isolation must be continued for that period, and the other children, if any in the house, kept away from day and Sunday Schools. The contagium is given off from the skin and breath, and clings persistently to clothes, hence the disease is spread more by contact of one child with another than by air. The mortality in this disease is directly proportionate to the age of the child; the older the child the better chance it has of recovery.

Bronchitis, Pneumonia, Croup, Diarrhoea, a liability to Consumption, Inflammation of the Kidneys, even in mild cases, follow on the disease, if the child is not protected by

BEING KEPT WARM IN BED.

Several cases of Scabics and Impetigo Contagiosa have been discovered. They were excluded and have all been cured.

A few cases of Ringworm were found during the year. This Borough is singularly free from this disease. No case of this disease is allowed to return to school until microscopic examination has been made of the hairs and no spores found.

Sanitary Improvements.

Several sanitary improvements have been made during the year. In July the drains of the boys' closets at St. Andrew's, Eccles, were found to be blocked. In order to avoid closing the school I closed the boys playground; caused the girls to enter by the Infant School entrance and the boys by the girls' entrance, and had separate times of play allocated to the two sexes. The obstruction was found to be at the junction of the drain from the school with the sewer in Paradise Street. It consisted of an old boot, two large pieces of wood and several sticks. The Managers of the school took the matter in hand and rectified the defective drainage. New drains have been laid, interceptors and inspection chambers provided and ventilating shafts fixed. Credit is due to the Managers for the thorough way they tackled this defect. The drainage is now perfect. At St. Andrew's, Monton, a new floor has been provided, and a separating screen fixed in the middle of the large room. At St. Mary's the small class room, on which I have previously

adversely reported, has been done away with, the room has been enlarged, a new cloak room provided, and the school is now in a thoroughly sanitary condition.

The gallery at All Saints' School has been removed, and a new stove provided. The heating of the infants' room has been much improved.

Sanitary rolls are provided to the schools.

At Green Lane Council School the boys are taught to take barometric readings.

In several cases children suffering from infectious disease have been found in attendance at my visit. For example, on August 24th a child suffering from Scarlet Fever was found at Patricroft National School; another child suffering from Erysipelas of the face was found at St. Andrew's; and on November 21st a child was found at St. Mary's suffering from Enteric Fever. This child had a temperature of 104° , and its blood gave a positive Widal reaction.

Following the procedure of the London County Council, the Committee is trying to establish "tooth brush clubs" in the schools. As a preliminary experiment the scheme is being tried in one school, viz:—St. Andrew's, Monton. The brushes are sold at twopence; they are supplied to the Committee at $1\frac{3}{4}$ d. The farthing profit will be used to provide brushes for those children who are too poor to buy them. It is too soon yet to make any statement as to the success or otherwise of the scheme.

There has been a large epidemic of Mumps during the latter part of the year. The disease has been of an atypical form. There has only been slight swelling of the parotid gland, no headache, no fever, no pain or pressure on the gland, and the children as a rule have not been ill. In a few cases there has been suppuration of the gland. The cases were so slight that I did not consider it necessary to enforce the three weeks quarantine. The number of cases notified was 120.

As I have had frequent applications from Medical Officers in other Boroughs for a copy of the School Notification Register in use in this Borough, I think it advisable to print a copy of it:—

FORM OF REGISTER.

No.	Name and Address.	Age	Sex.	School	Date of last attendance.	Date of Report to M.O H

Disease.	Date when scholar may return.	Milk supply.	Doctor.	Date of Inspector's visit	Date when sent to School Attendance Officer.

STAMMERERS.—The treatment of this condition has been continued during the year. Altogether 79 cases have been instructed in special classes. The reports from the teachers on the after condition are on the whole favourable. The essential condition to success is that the parents should take the trouble to see that the child continues the vocal exercises taught. If this is not done relapses are inevitable.

The average time occupied in the examinations is five minutes and a decimal varying from .1 to .7.

I think now that the average time occupied in actual examination has been worked out this item might be omitted. To say the least it is not pleasant for a professional man to have his time taken in the same way as a scavenger or labourer. The time taken is no criterion of the quality of the work done.

Serious floodings occurred at St. Mark's, St. Michael's and St. Andrew's (Monton) Schools during the year. The Highways Committee are preparing a scheme to prevent the recurrence of this nuisance.

The following Schedule gives in detail the school work done during the year :—

MIXED DEPARTMENTS.	New Admissions		Gen. inspection defective.	Ill clothed.	Malnutrition or underfed.	Dirty head.	Dirty body.	Enlarged tonsils.	Adenoids.	Glands.	External eye disease.	Bad teeth.	Defective sight.	Ear disease.	Hearing or speech defective.	Mentally defective.	Heart and circulation.	Rickets.	Delicate.	Other defects.	Parents written to.	Parents interviewed.
	Normal	Defective																				
ALL SAINTS' (R.C.) ...	22	14	11	—	—	13	2	5	—	1	1	2	4	—	—	—	—	—	—	2	22	18
BARTON WESLEYAN..	5	4	5	—	—	1	2	1	—	—	—	1	2	—	—	—	—	—	—	2	6	5
BEECH STREET (SEN)	6	6	4	—	—	2	—	3	—	2	—	2	2	—	—	1	—	—	—	—	6	13
BEECH STREET (JUN.)	8	10	5	—	—	3	—	2	—	2	—	3	5	—	2	—	—	—	—	4	10	9
CLARENDON ROAD ...	30	34	2	—	—	5	—	15	3	4	1	18	5	—	1	—	—	—	—	2	10	35
ECCLES PARISH...	21	27	15	—	1	12	4	6	1	4	4	13	9	4	—	1	—	1	—	3	25	28
GODFREY ERMEN MEM	22	25	17	—	—	10	—	15	—	9	—	12	6	1	—	—	1	—	—	5	23	31
GREEN LANE ...	2	1	5	—	—	1	—	4	2	—	—	3	2	—	—	—	—	—	—	1	7	4
HOLY CROSS (R.C.) ..	12	19	14	—	—	14	4	8	1	1	—	9	3	—	—	—	—	—	—	3	20	16
LEWIS STREET (SEN.)...	23	20	13	—	—	6	6	5	2	4	1	4	15	—	—	2	—	—	—	2	22	26
LEWIS STREET (JUN.)...	29	25	10	—	—	14	3	10	1	7	—	11	3	2	—	—	1	—	—	—	16	31
MONTON DAY ...	21	12	8	—	—	3	—	3	—	2	—	8	6	—	1	—	—	—	—	—	12	19
PATRICROFT (C. of E.) ..	24	18	23	—	—	8	—	6	4	2	1	9	13	1	2	1	1	2	1	2	28	28
PEEL GREEN ..	15	6	7	—	—	2	2	1	—	2	—	1	2	2	—	1	—	—	—	2	8	8
ST. ANDREW'S (E.) ...	22	20	26	—	—	13	1	8	1	4	3	7	12	1	3	—	2	—	1	2	31	19
ST. ANDREW'S (M.) ..	23	6	4	—	—	3	—	1	—	1	—	3	3	—	—	—	—	—	—	—	3	18
ST. MARK'S ...	2	3	2	—	—	—	—	1	—	—	1	3	1	—	1	—	—	—	—	—	2	5
ST. MARY'S (R.C.) ...	19	20	17	—	—	4	1	8	—	5	4	8	15	1	—	—	—	—	—	5	23	19
ST. MICHAEL'S ..	3	16	7	—	—	7	1	6	—	6	—	—	7	—	—	—	—	—	—	2	10	17

Totals

Report of School Medical Inspections for the year 1910.

INFANTS' DEPARTMENTS.	New admissions.		Gen. inspection defectives	Malnutrition or underfed.	Dirty head.	Dirty body.	Enlarged tonsils.	Adenoids.	External eye disease.	Bad teeth.	Defective sight.	Ear disease.	Mentally defective.	Heart and circulation.	Rickets.	Delicate.	Other defects.	Parents written to.	Parents interviewed.
	Normal.	Defective																	
ALL SAINTS' (R.C.) ...	27	14	1	—	1	2	2	—	2	5	1	—	—	1	2	—	3	6	22
BARTON WESLEVANS..	4	—	6	—	5	—	—	—	1	—	—	—	—	—	—	—	1	6	—
BEECH STREET ...	55	39	27	2	12	8	15	2	7	15	3	2	1	—	6	—	11	36	52
CLARENDON ROAD ...	47	23	5	—	1	—	12	—	—	10	1	1	—	—	3	—	10	11	43
ECCLES PARISH...	26	41	7	—	4	4	14	1	—	17	5	2	—	—	3	2	14	19	30
GODFREY ERMEN MEM.	40	29	4	—	5	1	8	3	—	10	—	1	—	—	3	—	12	11	45
HOLY CROSS (R.C.) ...	22	14	5	—	8	1	5	—	2	3	2	1	—	1	—	1	3	10	21
LEWIS STREET ...	73	50	44	—	33	14	11	3	6	18	2	3	1	—	2	1	22	52	70
MONTON DAY' ...	36	15	1	—	—	—	8	1	1	5	1	2	—	—	—	—	3	2	41
PATRICROFT (C. of E.) ...	31	38	5	—	7	2	11	1	—	17	1	2	—	—	2	—	13	14	49
ST. ANDREW'S (E.) ...	41	40	3	1	6	—	17	2	1	15	5	1	1	—	2	1	11	14	47
ST. ANDREW'S (M.) ...	29	16	—	—	2	—	5	—	—	5	1	2	—	—	—	1	6	1	34
ST. MARK'S ...	31	19	7	—	6	—	5	3	2	5	3	—	—	—	—	1	8	5	43
ST. MARY'S(R.C.) ...	24	25	4	1	4	2	10	2	2	10	1	1	—	—	1	1	5	10	30
ST. MICHAEL'S ...	21	24	6	—	4	—	11	—	2	6	1	1	—	1	2	1	11	8	31
TOTALS ...	507	387	125	4	98	34	134	18	26	141	27	19	3	3	26	9	133	205	558

SUMMARY OF REPORT.

No. of new admissions examined	...	...	...	...	...	1489
Normal on admission	...	...	...	...	...	816
Defective on admission	...	...	...	...	...	673
Other defectives found at General Inspection	...	...	...	...	...	320
Total number of defectives found	...	...	..	...	...	993
Number of Parents present at Examination	...	...	...	...	...	907
Number of Parents personally informed of defects	...	...	...	...	...	472
Notices of defects sent to Parents	...	...	...	...	...	489
No. of Scholars over 13 years of age examined	...	..	...	...	...	225
Out of 219 dirty heads discovered during the year,						
185 have been cured						
7 improved or under treatment (under observation of S.M.O.)						
2 unchanged	do.					
13 left school						
12 not yet reported upon	do.					
82 scholars excluded from school, of these 61 have been found						
cured						

The Eccles Education Committee has adopted the following special duties of the school caretaker when school has been closed for infectious disease :—

1. During the time the School is closed all office floors, seats, walls, doors, pails and troughs, should be thoroughly scrubbed and cleansed. The offices should be limewashed where previously limewashed.
2. All drain grids should be taken off and the traps cleansed, the drains being thoroughly flushed afterwards.
3. All refuse should be cleared away and the dustbins washed with disinfectant both inside and outside.
4. All towels and dusters must be washed and boiled.
5. All cloakroom floors, stands, pegs and peg-rails must be scrubbed with soft soap and the three latter wiped over with a cloth damped in chloros.
6. All lavatory basins, sinks and all cupboards and fittings in connection with them must be thoroughly scrubbed with soft-soap and water.
7. All walls, beams, ledges, window-sills, and tops of cupboards must be dusted with a damp duster before any scrubbing is done.
8. All floors and all skirting boards must be thoroughly scrubbed with soft-soap and water and all benches and desks rubbed over with a cloth moistened in paraffin or chloros.
9. All maps, pictures, etc., must be taken out in the open-air and dusted with a damp duster.
10. All blackboards must be washed and all inkwells soaked in water for some time and then thoroughly cleaned.
11. All books that have been in use must be taken out and dusted in the open-air.

As considerable uncertainty exists in the minds of some of the Members of the Committee on the question of exclusion for Infectious Diseases, I reprint the following :—

THE LOCAL GOVERNMENT BOARD AND THE
BOARD OF EDUCATION HAVE LAID DOWN
THE FOLLOWING RULES FOR ACTION IN
RESPECT OF PARTICULAR DISEASES AND
RULES OF OFFICIAL PROCEDURE.

The diseases for the prevention of which the exclusion of particular children from school or school closure may be required are principally those which spread by infection directly from person to person, such as measles, whooping cough, scarlet fever, diphtheria, epidemic influenza, small pox and rōtheln (German measles). In rare cases the same measures may be necessary for enteric fever and diarrhœal diseases, when these spread through the agency of local conditions, such as infected school privies.

In the light of the general principles already set out the following procedure appears to be indicated in order to enable the Medical Officer of Health or the School Medical Officer to advise as to the minimum duration of exclusion of school children which can with reasonable safety be adopted in the several more common infectious diseases. It should be noted that although certain recommendations are made as to duration of exclusion of patients and of "contacts" with them, these recommendations are subject to the proviso that *each case as it occurs requires and should receive individual consideration.*

Scarlet Fever.

A. RULES FOR EXCLUSION OF INDIVIDUALS.

(1.) *As regards each child attacked by the disease.*

(a.) *When treated in the Isolation Hospital* he is usually detained for about six weeks, and longer if any mucous discharges continue. After return home, in view of the occasional protracted infectiousness of patients with such discharges, and sometimes even of those without them, a notice should be sent to the teacher, and a notice should also be given to the parent to the effect that the patient should not attend school for two weeks.

(b.) *When the patient has been treated at home* the same rules apply exactly, assuming that the patient and his rooms have been effectively disinfected after the illness has ended.

(2.) *As regards children living in infected houses.*

(a.) *When the patient has been removed to the Isolation Hospital* the teacher and the parents should be instructed to keep all children living in the same house away from school for two complete weeks from the day on which disinfection, subsequent to the removal of the patient, has taken place; and the parents of all children in the house, especially the parents of the patient, should be instructed to keep their children out of contact with other children for the same period.

This interval, although longer than the longest recognised incubation period for scarlet fever, is desirable in the case of children because of the occasional occurrence of anomalous or slight unrecognised attacks.

(b.) *When the patient is treated at home* no other children from the same house should attend school while the patient is infectious, nor for two weeks after the end of his period of isolation.

B. RULES FOR CLOSURE OF SCHOOL.

If there is active co-operation between the school attendance officers and teachers and the Medical Officer of Health, school closure should only exceptionally be needed for scarlet fever. In school this disease usually spreads slowly from child to child, and not in the explosive manner characteristic of measles. Hence diligent search for slight cases and supervision of "contacts" should in most instances render school closure needless.

Diphtheria.

A. ADVANTAGE OF BACTERIOLOGICAL EXAMINATION.

The examination of the throats of "contacts," whenever practicable, by bacteriological means, is a most important aid to precautionary measures against the spread of diphtheria. If a positive result is obtained in the case of children showing no

evidence of diphtheria, the presence of some measure of infection must be assumed, though it will not be advisable to insist on the removal of such patients to an isolation hospital.

It is recognised that in many sanitary districts arrangements do not exist for such examinations; but it has been thought better to set forth the line of action commonly adopted in the best organised sanitary districts. Clinical examination of contacts and other children often throws valuable light on the origin of outbreaks of diphtheria. Particular attention should be paid to children who have been absent without known cause, or who show evidence of pallor, enlarged glands, or sore noses.

B. RULES FOR EXCLUSION OF INDIVIDUALS.

(1.) *As regards each child attacked by the disease.*

- (a.) *When treated in the Isolation Hospital* the patient should, when practicable, be detained until three successive swabs taken on different days have given consistent negative results. These swabs should not be taken until at least 48 hours have elapsed since the last application of any disinfectant to the throat.

In view of the debility left by an attack of diphtheria, and the possible return of infectivity in the secretions of the nose or throat, a notice should be sent to the teacher stating that the child should not return to school for four weeks after return home.

- (b) *When the patient has been treated at home* three successive negative swabs should, when practicable, be obtained as above; and after disinfection of the patient and his rooms and belongings, the same period of subsequent abstention from school attendance as above should be enjoined.

(2.) *As regards children living in infected houses.*

- (a.) *When the patient has been removed to the Isolation Hospital* the teacher and the parent should be instructed to keep all children living in the same house away from school during the next two complete weeks, or even longer, unless these children have been cleared by negative result of bacteriological examination.

This interval is desirable owing to the frequent occurrence of slight cases of diphtheria and "carrier" cases.

- (b.) *When the patient is treated at home* no other child from the same house should attend school while the patient is infectious, nor for four weeks afterwards.

C. RULES FOR SCHOOL CLOSURE.

Although diphtheria, like scarlet fever and unlike measles, usually spreads comparatively slowly in schools, it is apt to be very persistent, and not infrequently causes serious mortality, especially among children under five years old. For these reasons, when cases of this disease occur in an infant school, there should be no hesitation in excluding children from attendance who are below the age of compulsory school attendance. This latter remark applies also for measles and whooping cough.

Closure of other classes of the school should be resorted to only after clinical examination and, where practicable, bacteriological investigation for the detection of diphtheria bacilli in the pharyngeal or nasal mucus of children who have had slight sore throats, and of all other children who have been in contact with diphtheria patients has been made.

The need for protracted exclusion from school of recent diphtheria patients has already been emphasised. The systematic use of these measures should obviate the need for school closure for diphtheria.

Other Notifiable Diseases.

Children coming from houses in which have occurred cases of erysipelas or of enteric (typhoid) fever who are not themselves ill, need not as a rule be excluded from school. Nor is school closure required for either of these diseases, except in the rare instances in which enteric fever is due to some condition directly connected with the school.

Measles.

A. CHARACTERISTICS OF THE DISEASE.

Certain facts need to be borne in mind in adopting preventive measures against measles. In towns the attack rate is highest in the third, fourth and fifth years of life, while the death

rate caused by the disease is highest in the second year of life. After the age of five the death rate caused by it is relatively very small. These facts clearly indicate the importance of postponing an attack of measles, and of adopting special measures to ensure increased safety for children under five.

Persons seldom contract measles a second time, and as in populous districts epidemics commonly recur every two or three years, most of the older children are protected against it by having passed through a previous attack. This rule may not apply to a country village, in which epidemics may be absent for a long series of years.

The early infectiousness of measles while the symptoms are only those of a common "cold" is another marked feature of this disease. It is not unlikely that a majority of the total cases are infected by patients in this early stage. The incubation period from infection to the commencement of catarrhal symptoms is 12 to 14 days with fair constancy.

Although measles is very infectious its infection does not appear to be long lived nor to be commonly conveyed by healthy persons. It thus differs from small pox, scarlet fever and diphtheria.

But though there is reasonable ground for the opinion that measles is not readily, if at all, conveyed to school by healthy children coming from infected households, it is desirable, particularly in view of the greater fatality of attacks of measles in children under seven years of age, to assume the possibility of such spread by intermediaries in regard to scholars attending the infant school, and to act accordingly as stated below.

B. RULES FOR THE EXCLUSION OF INDIVIDUALS.

(1.) *As regards children suffering from the disease.*

Children attacked by measles should be kept from school for four weeks.

(2.) *As regards other children living in infected houses.*

In large towns, and in the smaller districts in which the majority of children over seven years of age who are attending public elementary schools have had measles, the practice is

frequently adopted, when measles breaks out in a household, of excluding from school attendance only those children of the same household who attend the infant school, and those older children of the same family who have not had measles. These particular children of the same household should be excluded from school until 21 days from the date of onset of the illness of the last patient with measles in the house.

The above procedure can be recommended as the result of experience in large districts. It is a compromise which is obviously not a counsel of perfection, and may need future modification. Even under present conditions the procedure may need to be modified in accordance with the special circumstances of a particular district, with special reference to its past history as to measles. The schedules for the medical inspection of school children, if kept carefully, will, in course of time, place at the disposal of the Medical Officer of Health and of the School Medical Officer the history of each child as to measles, as well as to other infectious diseases, and they will thus be able to decide, when a case of measles occurs in a particular class, which scholars in that class should, and which should not, be excluded from attendance at school.

C. RULES FOR SCHOOL CLOSURE.

School closure has probably more frequently taken place on account of epidemics of measles than for any other disease, but as the closure has been commonly deferred until a large proportion of the children are already absent, it has proved useless, in populous districts at least, for the purpose of preventing the spread of the disease.

If measles is introduced into a school, the first crop of secondary cases will occur about 12 days after the original case, and in 12 days more there will be a second crop comprising the majority of the unprotected children. Thus school closure, as ordinarily practised after the second crop of cases has occurred fails to prevent an epidemic. In view of this experience a class closure of short duration after the occurrence of the first case of measles in the class may be substituted, the class being closed on the ninth day after the sickening of the first child, for a period of five days only. After this period, only those who have sickened need be

excluded, along with those in the same household who have not had measles or who attend the infant school.

D. WARNING TO PARENTS.

Warning notices to parents have been found to be valuable in preventing the spread of measles through the attendance at school of infecting children. These warnings should be sent out as soon as measles has appeared in a class, the parents being warned to watch their children and to keep them from school if the slightest symptoms of a "cold" develop during the following three weeks.

The warning notice should also suggest that the parent should at once inform the teacher if these symptoms develop. The teacher can then report the case to the Medical Officer of Health and the School Medical Officer.

Whooping Cough.

The rules as to exclusion from or closure of school for this disease should be similar to those for measles, except that the infection of whooping cough probably lasts six weeks, and the children in the house who attend the infant school should therefore be excluded from school for this period—or as long as the cough continues.

Mumps and Chicken Pox.

Three weeks' isolation should be allowed for cases of mumps, and the same period, or until all scabs have disappeared, for cases of chicken pox. Inquiry should be made as to the vaccination of supposed cases of chicken pox.

In chicken pox it is well to exclude from attendance at the *infant* school all children of the same family as the patient. In mumps the same practice, owing to the long incubation period of this disease, involves much greater interference with school work; and in view of this fact and of the absence of danger of life, the exclusion may be confined to the patient himself.

Pulmonary Tuberculosis.

Pulmonary tuberculosis in a recognisable form is seldom a large factor in school life. Where it is known to exist, either through the medical inspection of children or apart from this, the affected

scholar should be excluded from school in his own interest and in that of the school, if the patient has cough with or without expectoration.

GENERAL NOTES AS TO PROCEDURE.

In any case in which the Sanitary Authority require the closure of a public elementary school the notice should be addressed in writing to the Correspondent of the managers and should state the grounds on which the closure is deemed necessary. It should be signed either by an authorised Officer of the Sanitary Authority in pursuance of their resolution, or by two members of the Sanitary Authority. A copy of the notice should be sent to the School Medical Officer.

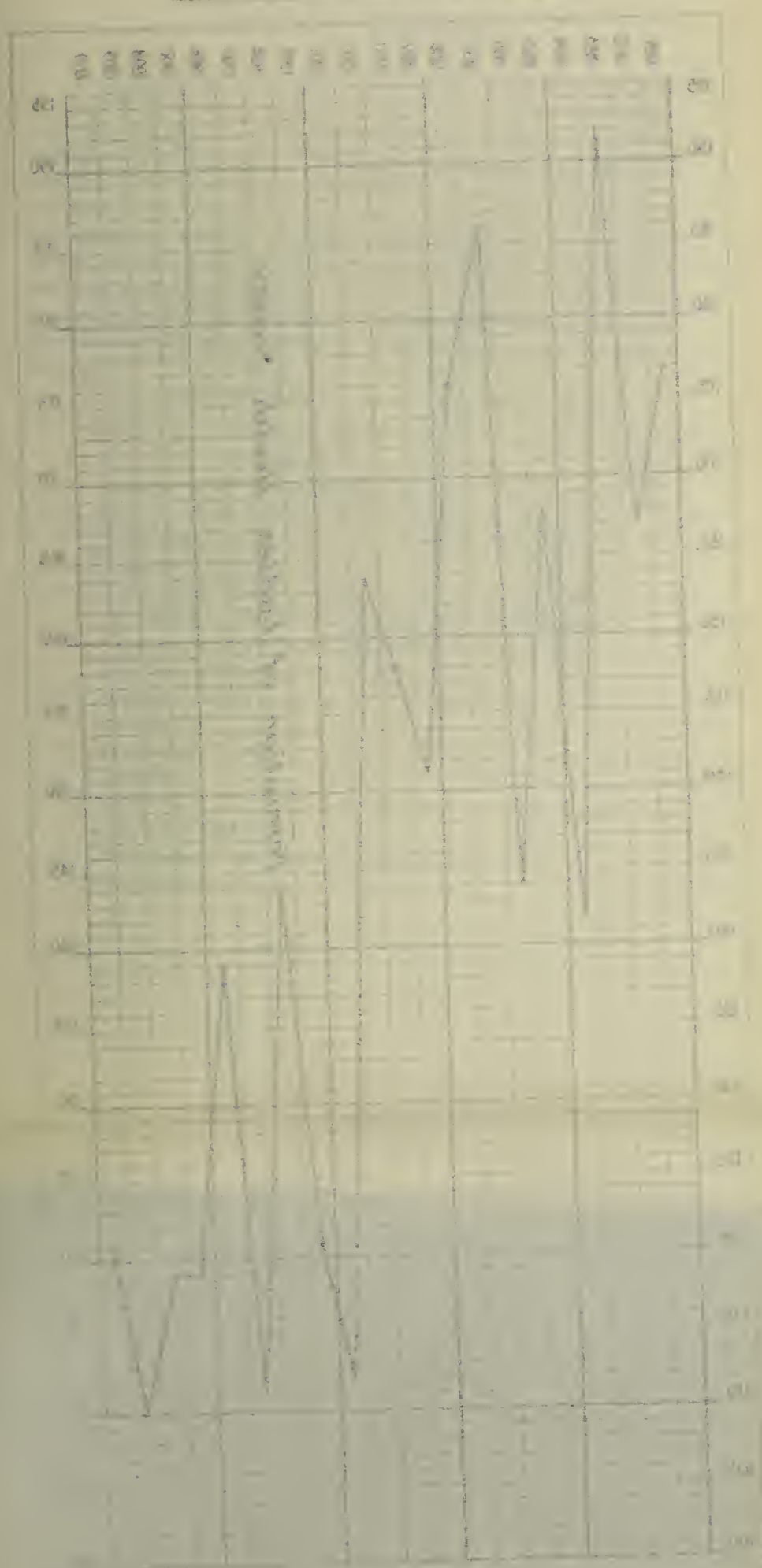
All such notices must specify a definite time during which the school is to remain closed; this should be as short a period as can be regarded as sufficing on public health grounds, since a second notice may be given before the expiration of the first, if it should be found necessary to postpone the re-opening of a school.

Reports of Medical Officers of Health to Sanitary Authorities, advising the closure of a school or schools in any district, are to be treated as "special" reports within the meaning of the General Order of the Local Government Board on March 23rd, 1891, and copies of them are required by Article 18 (15) and (16) of that Order to be sent to that Board and to the County Council. These reports should state the grounds upon which the Medical Officer of Health advocates the closure of the school or schools in preference to the exclusion of particular scholars.

Any directions or authorisations given by the School Medical Officer with respect to the question of excluding individual scholars on the ground that their exclusion is desirable to prevent the spread of disease must be embodied in a certificate signed by him; and a copy of every certificate must be furnished to the Local Education Authority (Article 53 (b) of the Code of 1908). The certificate must be produced if required to any Inspector or Officer of the Board of Education's Medical Department.

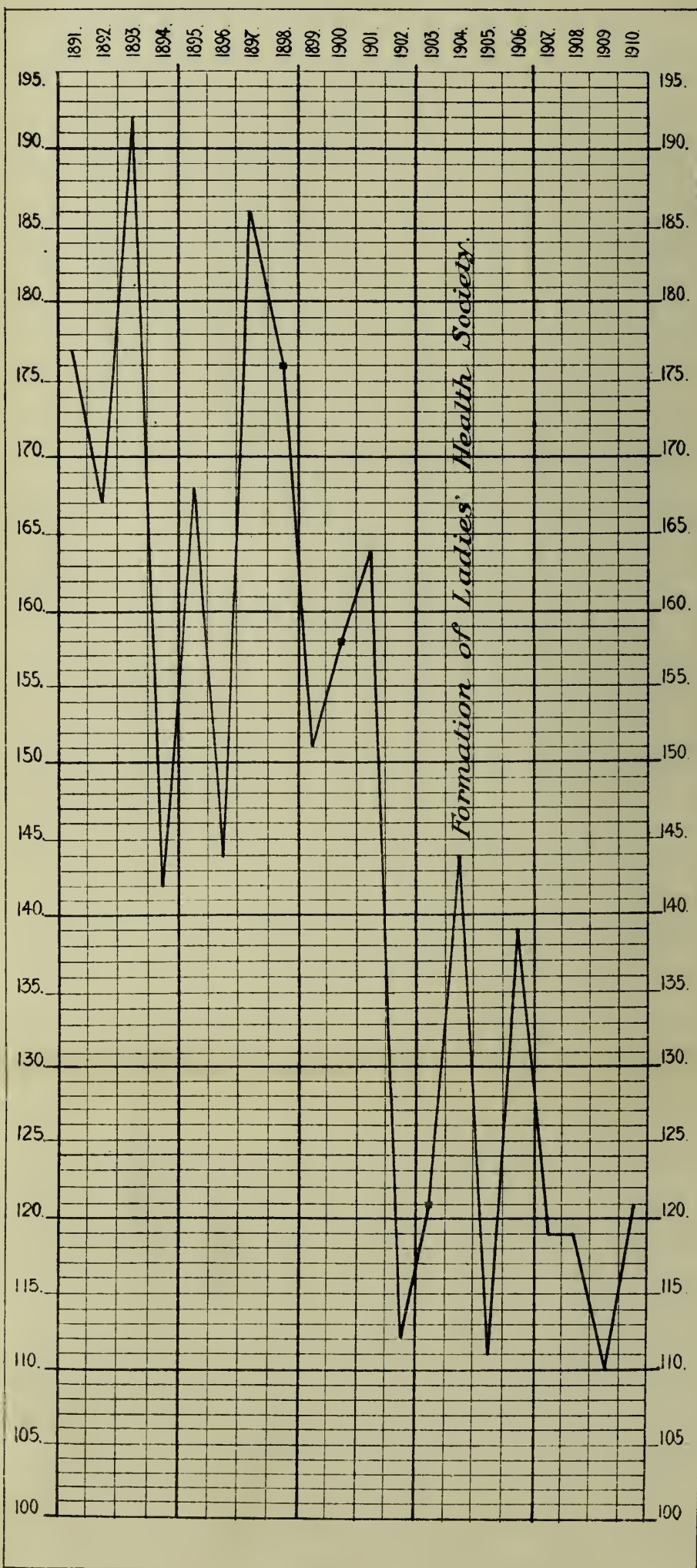
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ART SAEWING INFANTILE MORTALITY

FROM 1891 = 1910.



SECTION VI.

Infantile Mortality.

The Infantile Mortality rate for the year was 121, as compared with 110 for last year; 119 for 1908; 119 for 1907, and 176 for ten years ago. Although the rate is higher than last year, it shews a considerable improvement in the decade. The Ladies Health Committee, which is a voluntary effort controlled by some of the leading ladies in Eccles, continues to do good work, as is shewn in the Report of the Hon. Secretary (Mrs. Mellor). I regret to report that the special food issued by the Health Committee for the last twelve months has not yielded results in accordance with our anticipations. The following extracts from the reports of one of the Health Visitors shews that the experiment is worth a further trial, and that in many cases the cause of death is parental.

INFANTS RECEIVING SPECIAL FOOD.

Twins.—H.J. Commenced March 13th, 1910. Died, May 31st, 1910. Marasmus.

J.J. Commenced March 13th, 1910. Good results.

These babies were born under very sad conditions.

C. Commenced March 15th, 1910. Finished May 12th, 1910. Very satisfactory.

A. Commenced March 22nd, 1910. Died May 9th, 1910. Convulsions. This infant was born under sad conditions.

H. Commenced March 26th, 1910. Died May 26th, 1910. Gastritis. Dirty, careless mother.

T. Commenced July 22nd, 1910. Died September 22nd, 1910. Enteritis.

G. Commenced November 3rd, 1910. Died November 4th, 1910. Enteritis.

F. Commenced Nov. 4th, 1910. Finished Dec. 14th, 1910. Improving nicely.

F. Twin babies. Commenced December 14th, 1910. Satisfactory progress.

During the year 27 deaths were due to premature births. These deaths are preventible, and will be prevented when the teaching of Hygiene and Temperance become universal in our Elementary Schools. To effect this will take a generation. Still it is our duty to lay the foundations and to try and inculcate the principles of clean and healthy living among the children who will succeed us.

Premature and immature births are mainly due to (1) Early Marriages; (2) Syphilis; (3) Alcohol; (4) Overcrowding; (5) Parental Carelessness.

The Notification of Births Act is in force. The great majority of births are notified. It is now the duty of the father, if he is residing in the house where the birth takes place, at the time of its occurrence, and of any person (including the medical attendant or midwife) in attendance upon the mother at the time of, or within six hours after the birth of the child, to give notice in writing of the birth to the Medical Officer of Health. Forms for Notification are supplied from the Health Office, and the notice must be given within 36 hours of the birth. The cases to which the Health Visitors are sent are carefully selected in the office, and careful judgment is exercised in the selection. In this way the Visitors get in touch with the child in its first week of life—the most important period of its existence. As more than one-third of the deaths of infants occur in the first month of life, it will readily be seen how superior this method is to the old régime under which we did not get this information, in many cases, till after the lapse of six weeks.

Last year I reported as follows:—The principal causes of infantile mortality may be summed up in (a) Parental conditions; (b) Bad feeding; (c) General mismanagement and exposure to cold; (d) Alcoholism. The factors which tend to the physical well-being of the infant are:—Healthy parentage, breast feeding, pure milk supply in cases in which artificial feeding has to be resorted to, warmth, fresh air, cleanliness, and plenty of sleep. It is also urgently necessary that mothers and expectant mothers should be efficiently cared for and instructed in the management of themselves before and after child-birth, and in the proper feeding and management of their off-spring during the first twelve months of its life. Unhealthy conditions of the body and its principal organs may be induced during this period, which, if not fatal, may render the child weakly and delicate for the remainder of its life.

This work is being done by the Ladies' Health Society, to whom too much praise cannot be given for the voluntary work they do. An Order of the Local Government Board, on the appointment and qualifications

and duties of Health Visitors, was issued in September last to the London County Council and to the Metropolitan Boroughs. It will probably shortly be issued to provincial towns. It is worthy of note that in this particular, as in many other efforts which affect the public health, this Borough is well to the front in its endeavour to reduce mortality.

The principal functions of Women Health Visitors are:—

(a) *To advise expectant mothers on the management of their health, and as to the influence of ante-natal conditions on their infants.*

(b) *To follow up the notification of births, and to visit the homes when doctor and midwife have ceased to attend.*

(c) *To note conditions of ignorant feeding or of non-supply of sufficient and nourishing food, and to take judicious steps to correct these evils.*

(d) *To give advice on the proper feeding of infants; to warn mothers against premature weaning; to inculcate in particular the importance of breast feeding until the teeth appear; and, above all, of the use of foul feeding bottles.*

(e) *To promote and encourage the practice of weighing infants regularly, and to instruct or remind mothers on points of general hygiene.*

(f) *To instruct and guide in their work any Voluntary District Visitors who assist in Health Visiting.*

(g) *To note any insanitary or foul conditions in any of the homes visited, and in any of the inmates of the same, and to report these points to the Medical Officer of Health under whom they work.*

The Order referred to above makes it obligatory for the Health Visitor to work under the Medical Officer of Health.

I have pleasure in publishing the Report of the Ladies Health Society, kindly furnished by Mrs. Mellor.

The accompanying Chart shews the annual rate of Infant Mortality.

The most important factors in child mortality are maternal ignorance; badly and unsuitably prepared food when the children are not breast-fed, and a want of recognition of responsibility on the part of both parents. This latter fault will be gradually dispelled by the instruction of girls in the higher standards of the Elementary Schools and also in schools of every grade in the country. If the girls in the two groups of schools are ever to experience the supreme and greatest of all joys of

motherhood they must be taught that they must nurse their off-spring. It seems strange in the 20th century to have to advocate, what is a primæval doctrine—the duty of the mother to the child.

Another cause of Infantile Mortality—which I regret to report is applicable to this Borough—is found in unpaved and unmade-up roads and back streets and unpaved back yards of houses. During the year a most excellent report was issued by Dr. Newsholme (Chief Medical Officer Local Government Board), from which I give the following extract, *i.e.*, the want of paving referred to above:—

“ All these lead to dirtiness of the environment of the house, to treading of dirt, often of excretal origin, into the house, to a lowering of domestic cleanliness, and—what is perhaps worse—to the disheartening of the overworked mother who wearies in her house pride, which is constantly being thwarted by the terrible condition of things outside the back door. In this we have the secret of many of the disasters of domestic life. It is easy to say the people are responsible. To a large extent they may be—but not altogether. These are matters belonging to the Local Authority and to the administrative officers, and means must be devised to put an end to such things all over the country. We are particular, and rightly so, that the dairies and cowhouses shall be kept clean in order that the milk supply shall not be contaminated. Yet in many a place the surroundings of the house are so bad that no amount of pure milk can give health or ward off disease. There is no chance for the finer aids to health and development, and we sympathise with the mother who has to wage warfare with the insanitary conditions under which she lives.”

The following are the recommendations of the Chief Medical Officer :

(1). “ The importance of more detailed information as regards all deaths occurring in infancy as a guide to administrative action. This is already done in some districts; in other districts such deaths are ignored unless due to infectious diseases.

(2). In each district an effort should be made to ascertain the number of still-births, and to investigate where practicable the circumstances connected with these and with the deaths of infants in the first month of life. The administration of the Midwives Act and of the Notification of Births Act offers many opportunities for inquiry, the results of which may be made of immediate value in public health administration.

(3). Inquiries under the last head will throw light on the character of the attendance available for women during childbirth, and on the availability of additional help when required. So far no exact information is obtainable as to the probable relation between the conditions under which childbirth occurs and the number of deaths in the first week of life.

(4). The evidence already available points to the conclusion that infant mortality can be lowered by giving adequate training and help to midwives. This especially applies to the saving of infant life at and soon after birth. It has also to be remembered that the midwife's influence with the mother, whom she has helped in her need, is very great; and it is her advice as to the management, and particularly as to the feeding of the infant which is most likely to be followed.

(5). Although this is so, experience is already showing the value of the work being done by health visitors, who, under present conditions, form an almost indispensable aid in influencing mothers in the management of their infants.

(6). The adoption of the Notification of Births Act is a necessary preliminary to the giving of such aid promptly, and I hope that ere long this Act will be generally adopted in country districts as well as in large towns.

(7). The efficient administration of the Midwives Act, the adoption of the Notification of Births Act and of additional arrangements for giving instruction in infant hygiene are urgently called for in the counties in which infant mortality is excessive.

(8). The measures indicated above furnish an incomplete remedy in the counties in which insanitary conditions are rife. Sanitary Authorities in compactly populated districts should decide to remove all dry closets if a water-carriage system is practicable, to introduce and maintain efficient scavenging, and to provide for the satisfactory paving of streets and yards when required. Doubtless these measures will be expensive; but they are much more economical than sickness and impaired efficiency of the population which are their alternative; and no Sanitary Authority can justify neglect in undertaking these elementary tasks.

(9). Sanitary Authorities, in the words of Sir John Simon, the first Medical Officer of this Board, are the "appointed Guardians of masses of human beings whose lives are at stake in the business."

Reference is made above to unpaved streets and passages. For years I have pointed out what an important part these conditions hold in Sanitation, and especially in Infantile Mortality. Nothing is more distressing to the careful and cleanly housewife than the continual undoing of her cleaning by the dirt introduced into the house from the unpaved streets. The condition is heart-breaking : she struggles against it, but in many cases at length loses heart and becomes careless, or to express her mental condition in the local dialect, she ceases to be "house proud." She is not to be blamed for this lapse from the high standard of house cleanliness with which she set out. The blame rests with the apathy of the Paving Committee of the town in which she resides.

BIRTHS.

During the year 963 births were registered. The birth rate was equivalent to 22·6 per 1000, as compared with 23·9 for last year.

For years I have pointed out how the birth rate is diminishing. The decline dates from the Education Act, 1870: the progress of education brought the pernicious literature advertised in the cheap papers under the cognizance of young married people. The desire for ease and individual comfort has led to the diminution of families. This social suicide first appeared in France. There the frequency of birth is in inverse ratio to the possession of real estate. The more proletarian the Department, the higher the birth rate, and *vice versa*. A well-to-do peasantry has few children, a poor peasantry has many. French towns inhabited by the upper and lower middle class have a low birth rate; manufacturing towns with a large working population have a high one. The statistics of taxation yield the same result; the smaller the means of the inhabitants the greater the number of births that fall to the share of every thousand married women. Even in prosperous towns, the more prosperous the quarters the less fertile its inhabitants. The same tendency appears in Great Britain. The poorer districts of London have a higher birth rate than the richer. Skilled artisans have smaller families than unskilled labourers. Maternity payments in the Hearts of Oak Society have diminished every five years since 1871. One investigator has proved that the number of births declined as the rent of dwellings increased. Another shows that in Italy the birth rate is higher in the illiterate districts. So in Germany it has been proved that the fertility decreases with increasing prosperity, and increases with diminished prosperity. The United States, if the continued emigration from Europe were to cease, would, in view of the fertility of the negro, become black in quite a short predeterminable time. In Australia, the

working man's continent, where the working classes are better off than anywhere else in the world, the decline in fertility is almost the greatest of all.

There is not any connection between the decline in the birth rate and religion or race. It first appeared in France when France was predominantly Catholic. Only poor Catholics and poor Jews yield a high birth rate. It cannot be attributed to increased industrialism or to the growing tendency to live in towns. The French peasantry have fewer children than the urban labourers. The differences of creed, race, occupation, or domicile are not the decisive factors, It is a question of material prosperity.

The real causes why fertility should decrease with increased prosperity (1) The diseases of sex, which appear as a concomitant to postponed marriages; (2) Mental disease, caused by nervous strain; (3) Diminution of desire for offspring, both because of competing pleasures and because of a more refined feeling for children. The most potent check is the cost of maintaining a larger number of children. The Peerage, in consequence of its duties, has so limited the size of its families that the majority die out in two hundred years. The limitation of the size of the family in consideration of the children's welfare first appears amongst the aristocracy, but spreads down to other classes. The decline of infant mortality is another cause. In the lower stages of civilisation the pleasures of life consist almost exclusively in the satisfaction of natural and instinctive desires.

So "the different behaviour of different classes of the same people and of the same people at different stages shows that sexual passion is no constant and regular motive as Malthus assumed." Nor is limitation of families a virtue, as Malthus supposed. It may be simply the choice between two pleasures, and it does not involve an increase of sexual continence.

The fact that the population is the greatest asset of a country is not recognised. As I pointed out above France is a great sinner in this respect; she would not have had to yield to Germany on the Morocco question had she had her normal population.

BOROUGH OF ECCLES.

Infantile Mortality during the Year 1910.

Deaths from stated Causes in Weeks and Months under One Year of Age.

Cause of Death.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes {	Certified	25	10	7	7	49	8	8	7	6	9	5	8	2	6	3	6	117
	Uncertified.. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Common Infectious Diseases {	Small-pox .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles .. ..	..	..	..	..	..	1	..	..	..	1	1	1	..	..	1	1	6
	Scarlet Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria (including Membranous Croup) .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoeal Diseases {	Whooping Cough.. ..	..	..	..	..	..	1	1	..	1	..	1	..	2	2	..	..	8
	Diarrhoea, all forms .. ..	..	..	..	1	1	..	2	..	..	1	1	1	..	..	..	..	6
	Enteritis, Muco-enteritis, Gastro enteritis .. ..	..	..	..	..	..	2	..	1	..	2	..	..	..	..	..	..	5
Wasting Diseases {	Gastritis, Gastro-intestinal Catarrh .. ..	..	1	..	..	1	..	..	1	..	1	..	2	..	..	..	..	5
	Premature Birth	20	4	2	..	26	1	..	..	..	..	..	..	..	..	..	..	27
Tuberculous Diseases {	Congenital Defects .. ..	..	1	1	2	1	5	..	1	..	..	1	..	..	..	..	..	7
	Injury at Birth .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Want of Breast Milk .. ..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
	Atrophy, Debility, Starvation, Marasmus	2	2	2	2	8	1	..	..	1	..	..	..	..	..	..	..	10
Other Causes. {	Other Tuberculous Diseases .. ..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
	Tuberculous Meningitis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Tuberculous Peritonitis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Tabes Mesenterica .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Other Causes. {	Other Tuberculous Diseases .. ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
	Erysipelas ... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Syphilis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Rickets .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Meningitis .. ..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
	(Not Tuberculous)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Convulsions	1	..	1	..	2	..	1	..	..	..	..	..	..	..	..	..	3
	Bronchitis .. ..	..	..	1	..	1	2	..	2	..	2	..	2	..	1	..	1	11
	Laryngitis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Pneumonia .. ..	..	..	..	..	..	..	..	3	2	1	..	..	3	2	3	..	14
	Suffocation, overlying .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Other Causes	1	1	..	2	4	2	1	2	..	..	1	..	..	..	1	..	11
		25	10	7	7	49	8	8	7	6	9	5	8	2	6	3	6	117

Births in the year { Legitimate, 928. Population estimated to middle
 Illegitimate, 35. of 1910, 42,500.

ECCLES LADIES HEALTH SOCIETY.

Annual Report for the Year ending December 31st, 1910.

The Eccles Ladies Health Society, in presenting their Sixth Annual Report, desire again to call attention to the work in which they are engaged.

The two Health Visitors give their whole time to calling upon mothers with infants, an arrangement of which the importance can hardly be over-estimated in view of the high rate of Infantile Mortality prevailing in all industrial centres. During the year 15,461 such visits were paid—8,022 by Mrs. Irlam, and 7,439 by Mrs. Morris.

The Superintendents report that, owing to the general improvement in trade, and consequent decrease of unemployment, there was considerably less need of outlay in milk in 1910 than in the previous year. This valuable food for infants and nursing mothers has been given in 41 cases, usually at the rate of one pint per day, in terms varying from one week to as many as eleven or even fifteen weeks in exceptional circumstances, such as the death of the bread-winner or prolonged illness. Where twin babies are born in labourer's homes a daily allowance of milk is generally given, even when the father is not out of work, such an event being necessarily a heavy tax upon small resources. This item cost the Society £8 4s. 3d. this year as against £15 18s. 7d. in the previous twelve months.

The greatest advance made by the Society is in the increased number of members attending the Mothers' meetings held each Wednesday afternoon. There are now 170 on the roll, whilst the average weekly attendance for the year is 65 women and 20 babies. At these gatherings, talks and short addresses on health or home subjects, and practical instruction in the making of clothing, are regularly given; everything possible being done by the Superintendent to encourage and educate the mothers in their family duties.

The Savings Club in connection with these meetings is increasingly taken advantage of by the members. In this manner £19 19s. 7d. has been saved during the year, of which £11 0s. 6d. has been withdrawn. In March a Maternity Club was started on the St Pancras lines, to which six expectant mothers have been contributing. Of these, three have withdrawn their savings, which amounted to £2 15s. 5d., in addition to the small bonus to which, under the rules, each is entitled.

As the Committee is represented on the Central Board of the Civic Guild of Help, the District Nursing Association, &c., cases of distress and illness reported by the Official Visitors can often be helped in their need.

Mrs. Morris, the Junior Health Visitor, having served for $2\frac{1}{2}$ years in that capacity, it was decided in November to advance her salary from 16/- to 18/- per week, thus placing both Visitors on the same standard of wages.

During the year the Eccles Ladies Health Society has lost the services of four valued members. Mrs. C. N. Higgin resigned her superintendence of Mrs. Irlam's district which she had held for the past two years, in consequence of her impending departure to Canada. Mrs. Ferguson, who had served on the Committee since its formation, has also left the district; whilst the death of Mrs. Spary, whose practical helpful lectures were so greatly valued at the Mothers' meetings, and that of Mrs. Neild, always a most interested and sympathetic member, are deeply deplored.

Mrs. Mellor kindly undertook the superintendence of the Patricroft (Mrs. Irlam's) district in place of Mrs. Higgin, in addition to her duties as Hon. Secretary. Mrs. Sidley has consented to superintend the Eccles (Mrs. Morris') district, in place of Mrs. Nanson, who has served in that capacity during the last six years.

In closing this Report the Society desires to express the regret felt by all, that the rate of Infantile Mortality in the Borough should again have risen to so high a figure as 121 per 1,000, as against 110 per 1,000 in the previous year. This unfortunate increase in the percentage is proved to be due to the epidemics of Measles and Whooping Cough, which prevailed during some months.

GRACE MELLOR,

HON. SECRETARY.

VACCINATION.

During the year there have been 555 successful Vaccinations, as compared with 628 for last year. I dealt with this subject fully last year. Exemptions numbered 280.

SECTION VII.

Phthisis and other Tubercular Diseases.

The death rate from Phthisis during the year was '90 per 1000 as compared with 1'1 for last year, '75 for 1908, and 1'2 for 1899. For the last nine years voluntary notification of this preventible disease has been in force in this Borough. I reported fully on this subject last year. It is regrettable that, with the exception of Poor Law cases, which are compulsorily notifiable, there seems no desire on the part of the medical men in the Borough to assist the efforts of the Committee in checking this disease by the notification of cases in the early stage. It cannot be too often insisted that the disease is *absolutely curable* in the first stage. The number of notifications received during the year was 48, of these 18 were Poor Law cases.

When information is received of the existence of a case it is at once visited (unless the practitioner notifying has expressed a wish for the case not to be visited). Enquiries are made as to the source of infection, habits of life, etc. A paper of instructions is given and explained to the patient, spitting cups are provided, with instructions to burn all sputa. Advice is given to the patient and to the patient's friends as to what precautions should be taken in the interests, not only of the community at large, but also of the patient himself. Dr. Newsbolme states "that no strict line of demarkation can be drawn between personal and communal interests is indicated by the fact that the community, by diminution of infection, and by avoidance of loss of working ability, gains greatly when patients are cured, or when, apart from their cure, they are so housed that they cease to disseminate infection."

It is very generally admitted that the spread of tuberculosis is due to a very large extent to the practice of indiscriminate spitting, and although a certain proportion of local authorities have made by-laws prohibiting spitting in public carriages, halls, waiting rooms or places of public entertainment, the duty of enforcing such regulations appears to be in the hands of no particular official. Spitting still goes on without let or hindrance and few if any prosecutions take place. The question may very properly be asked whether the time has not come for a by-law prohibiting spitting to be universally adopted and universally enforced.

The cases of this disease are frequently visited by the Inspectors. Periodical disinfection is carried out, spittoons are offered for the use of the patient, special instructions are given, and in every case ending fatally endeavours are made to have the whole house thoroughly disinfected.

The Phthisis Cartoon published by the "Medical Officer" has been posted in all the mills, schools, lavatories, and all places of public assembly.

No problem in Public Health has been attracting more attention during recent years than the question of dealing with this disease, aptly described as the "White Scourge." Some Sanitorians advocate the sanatorium treatment; others the establishment of tuberculosis dispensaries for the inoculation of tuberculin; a few pin their faith on the general improvement of the social and general sanitary condition of the people. The latter course, admirable as it is in respect to every condition of life, is manifestly futile in dealing with a disease of extremely acute infectivity. It is arguing on the same lines as the anti-vaccinators adopt with regard to small pox. The results from the sanatorium treatment of cases in the early stage of the disease have been excellent, not only in the curing of cases, but in the education of the sufferers in the all important doctrine of the OPEN WINDOW. In this and the burning of all expectoration we find the crux of the whole question. There is another point that might be dealt with in any future legislation on this question. It is a well known fact that males suffering from this disease, even in its advanced stage, are very amorous. Two cases of this have recently come under my notice. In one the parent—an ex-soldier—aged 32 years, has been suffering from Phthisis for three years. He obtains admission to the Union Infirmary, remains there for a month or two. He then takes his discharge, returns home and again impregnates his wife. This has occurred twice. He has at present five children. In this way a weak and enfeebled race is propagated. The other case is similar, with the exception of the Hospital nutrition, which was supplied him by friends and by the Civic Guild of Help. It seems apparent that such conditions should be made impossible either by isolation, segregation or emasculation.

A forward step in dealing with this disease has been made by the energetic Chief Medical Officer of the Local Government Board in the compulsory notification of Poor Law cases. It is to be hoped that this enactment will, in the near future, be made universal. The difficulty in dealing with this disease is that it cannot be classed with the other

infectious diseases, because it differs from them in almost every particular save its infectivity. Active steps must be taken to supplement notification. For example a special staff will be required to deal with the cases, and Sanatoria or Open Air Shelters will have to be provided. A very large field of work still remains to be done before this disease can be satisfactorily controlled.

SECTION VIII.

*Return of Samples purchased by the Police in the Borough of
Eccles, under the Food & Drugs Act. for the Year
ended December 31st, 1910*

No. Purchased.	Nature of Article.	Genuine	Adulter- ated.	Amount of Fine and Costs.	Remarks.
27 ...	Milk	25	2	£ s. d. 5 1 11	One fined 2/6 & costs 12/7, and one ordered to pay costs £4/6/11.
2 ...	Margarine	2	...	...
20 ...	Butter	20	...	...
3 ...	White Pepper	3	...	...
1 ...	Ground Ginger	1	...	...
3 ...	Irish Whiskey	3	...	...
3 ...	Coffee	3	...	...
4 ...	Lard	4	...	...
1 ...	Lemonade Powder	1	...	...
1 ...	Aperient Salts	1	...	...
6 ...	Scotch Whiskey	6	...	...
1 ...	Malt Vinegar	1	...	...
1 ...	Strawberry & Goose- berry Jam	1	...	...
1 ...	Damson Jam	1	...	...
1 ...	Rum	1	...	...
75 ...		73	2	5 1 11	

Kindly furnished by Mr. Superintendent KEYS.

MILK.

The following card has been supplied to each Cowshed —

BOROUGH OF ECCLES.

RULES TO MILKERS.

Let cleanliness be the motto in everything connected with the production of Milk.

COWSHEDS. Clean walls, ceilings, floors, window bottoms and corners.

ANIMALS. Clean haunches, udders and teats.

COWMAN. Clean hands, overalls and cap when milking.

UTENSILS. Clean cans, utensils, milking stools, &c.

Don't keep the milk vessels in the cowhouse.

Don't mix the milk of a poorly cow with milk which is intended for sale.

N.B.—This card to be constantly hung up in the cowshed.

W. M. HAMILTON, M.D., D.P.H.,

Medical Officer of Health.

SECTION IX.

Sanitary Work of the Health Department.

STAFF,

CHIEF INSPECTOR	...	...	...	C. W. LASKEY.
ASSISTANT INSPECTOR	...	...	...	G. LAWS. (Resigned July, 1910.)
Do.				E. T. KNOWLES. (Appointed August, 1910).
JUNIOR ASSISTANT	...	...	...	S. MYLES.
CLERK	...	...	...	T. P. HARDMAN.
DISINFECTOR	...	...	...	W. CROMPTON.

Privy Conversion.—The year ended December 31st, 1910, saw another considerable reduction in the number of privies and ashpits within the Borough, and the numbers in Wards, at that date, were as follows :—

WARD.	Privies	Ashpits
BARTON	76	13
ECCLES	25	6
IRWELL	29	15
MONTON	55	26
PATRICROFT	80	4
WINTON	52	—
Total	317	64

The abolition of privies has proceeded at a very good rate during recent years as will be seen from the following figures :—

1905	...	...	240	privy ashpits abolished.
1906	...	...	306	do.
1907	...	...	295	do.
1908	...	...	461	do.
1909	...	...	640	do.
1910	...	...	404	do.
Total			2346	

The number of water-closets provided in lieu of privies during the same period was as follows :—

1905	...	...	...	343	water-closets.
1906	...	...	...	407	do.
1907	...	...	...	489	do.
1908	...	...	...	651	do.
1909	...	...	...	836	do.
1910	...	...	...	548	do.
Total			...	3274	

As such conversions are accompanied by the provision of portable ashbins, the contents of which are removed weekly, the improvement in the sanitary conditions of such dwellings must be of real and permanent value.

In order to expedite as much as possible the work of abolishing the remainder of the privies, the Council has decided not to make any contributions towards the cost of the necessary works unless they are completed before September 30th, 1911. It is therefore to be hoped that before the end of the current year, all the premises in the Borough will be adequately provided with water-closets.

Drainage.—A considerable amount of drainage work was necessary in connection with these alterations, and 457 not newly-erected houses were furnished with entirely new drains. In such cases the obsolete pattern gullies were substituted by new self-cleansing gullies with spigotted tops.

Attention was paid to the necessity for proper ventilation of such drains, and 86 shafts of 4in. diameter strong iron pipes were provided and fixed in suitable positions. In nearly all cases such ventilators were fixed free of cost by the Paving and Sewering Committee.

All newly-laid drains are tested by water or smoke before being covered in. Such tests numbered 838.

District Inspection.—The inspection of certain parts of the Borough was carried on regularly, and as systematically as possible, having regard to the amount of other work in hand. There were 4,913 inspection of house premises, 111 inspections of stable and other similar premises, and 64 lots of drains were uncovered for inspection.

Dirty house premises are apparently on the increase—filthy conditions of houses, yards, and closets were found in 181 cases, as compared with 75 for the year 1909. Much more summary methods of dealing with such cases than are at present available ought to be provided; as some people will not attempt to properly cleanse their houses except under the pressure of a notice.

Overcrowding was discovered in 22 instances, and reductions in numbers were effected, but I am afraid that in the majority of cases the offenders simply joined other families, and thus continue the nuisance elsewhere.

Accumulations of manure and rubbish were dealt with wherever discovered, and efforts were made in the direction of obtaining the removal of all stable manure at least once weekly, especially during the summer months.

In 181 instances the ashbin accommodation was found to be unsuitable. Proper provision was subsequently made by the supply of suitable galvanized iron ashbins. The number of portable receptacles for house refuse in use at the end of the year was 9,435.

Full details as to the number and nature of the nuisances dealt with by the Staff will be found at the end of this Section.

Most of the improvements were effected by interviews, or by ordinary correspondence, but it was necessary to serve notices as under :

Preliminary notices (nuisances)	...	...	...	93
Statutory	do.	do.	...	167
Do.	do.	(Sec. 36 P.H.A.)	...	40
Do.	do.	(Sec. 41 do.)	...	7
Do.	do.	(Sec. 46 do.)	...	42
Do.	do.	(Sec. 5 Inf. Dis. Prev. Act 1890)	26	
Do.	do.	(Sec. 93 Eccles Corp. Act)..	27	
Do.	do.	(Sec. 95 do.)	18	
Do.	do.	(Sec. 22 P.H.A.A. Act, 1890)	6	

Zymotic Diseases.—From the middle of November to the end of the year, the Staff was engaged almost night and day with an epidemic of

Enteric fever. During ten days we had the assistance of two sanitary inspectors from the County Borough of Salford, and they were entirely occupied with a house-to-house visitation in the affected areas. The houses visited numbering 2,269.

Temporary assistance for the disinfection of house drains and the collection, removal, and cleansing of special typhoid fever pails, was also provided. There were 428 disinfection of house drains, and 447 removals of "pails."

Had it not been for this outbreak, the incidence of infectious disease would have shewn a marked reduction over previous years. To the "ordinary dangerous infectious" cases, 622 visits of inquiry and supervision were paid; the number of visits to cases of phthisis was 57, and to other cases of sickness—measles, etc. 889.

The number and variety of "School cases" reported during the past five years are as follows :—

	1910	1909	1908	1907	1906
MEASLES	393	174	777	276	196
CHICKEN-POX	37	201	74	45	20
WHOOPING COUGH	128	35	36	405	..
MUMPS	61	4	2	3	20
ECZEMA	6	13	20	25	11
RINGWORM	3	9	14	21	11
OTHER DISEASES (Ophthalmia, Sore Throat, Influenza, etc.)	3	2	24	3	14
Totals...	631	438	947	778	272

The disinfection of dwelling-house rooms numbered 334 ; there were 29 disinfections of school premises, and 21 books were fumigated. The disinfection of premises is carried out by thoroughly spraying with Izal, and subsequently fumigating with sulphur or Formaldehyde tablets.

There were 242 lots of bedding removed to the Sewage Works for steam disinfection. and in 260 cases the walls of infected rooms were stripped or limewashed by the occupiers—

Drainage Examinations.—As before stated 64 lots of drains were uncovered for inspection. There were 838 applications of smoke or water tests to drains—mostly in connection with work in progress. In addition to the tests referred to previously, we have now adopted a "ball test," with a view of ascertaining whether there are any obstructions in

the pipes when laid. In two instances contractors were proceeded against on account of defective workmanship, and were fined 40/- and costs, and £5 and special costs respectively.

Dairies and Cowsheds.—The number of premises registered for the sale of milk is 98, an increase by 16 over the figures for the previous year. The character of the premises used is as under :—

Exclusively for the sale of milk	...	23
Provision shops	... ..	53
Confectioners' shops..	... ..	14
Grocer's shops	... ..	4
Tripe shops	... ..	3
Greengrocers	... ..	1

The use of premises where vegetables are sold is deprecated as much as possible on account of the disturbance of dirt, especially from potatoes.

There are only ten cowkeepers within the Borough, this number being the same as in the previous year. There were 291 inspections of milkshops, and 67 of cowsheds, and very few instances of neglect or defects were noted.

Bakehouses.—There are no cellar bakehouses within the Borough. Those on the register now number 45, and 183 visits of inspection were paid to them. In 15 cases limewashing was required, and in ten others, various defects were noted. These were all promptly dealt with.

Slaughter-houses.—There are 14 slaughter-houses within the Borough, 11 registered, two licensed, and one which is neither registered or licensed. The latter is stated to have been in use since before the passing of the Public Health Act, 1875, but has never been registered. The number of inspections made was 178. In two cases there was a necessity for limewashing, and in two others, defects in respect of sanitary matters were noted.

One newly-erected slaughter-house, for pig killing solely, has been opened during the year. The premises and the fittings generally are eminently satisfactory.

Common Lodging-houses.—Two only. They continue to be as well conducted and kept as in former years.

Houses let in Lodgings.—There is considerable difficulty in obtaining the registration of all such premises. There is a natural objection to the supervision consequent upon such registration. Twelve houses are still on the register. Eight were given up during the year, - The occupiers probably keeping lodgers elsewhere unknown to the Authority. There were seven breaches of the bye-laws.

Fried Fish Shops.—Our register of such premises is still maintained, and their inspection continues to be most useful. There are 36 on the register—an increase of three over the figure for the previous year. Fifteen defects were noted and dealt with. There were 111 visits of inspection.

Stables and Piggeries.—111 visits of inspection were paid to such premises. In respect of the pig-keeping premises the use of the old insanitary wooden buildings is deprecated as much as possible, but, as recently a rate has been levied in respect of new brick styres erected in lieu of old wooden buildings, which were not previously rated, our efforts in this direction are likely to be seriously hampered. In the inspection of stable premises, considerable attention is paid to the frequent removal of manure.

Canal Boats.—During the year sixty-four canal boats were inspected, and in five instances there were infringements of the Acts or Regulations. In one case there was an absence of the certificate of registration, and in the other four the cabins had not been repainted within the period provided for.

Notices were served in every case, and have all been complied with.

The boats inspected were registered for the accommodation of 207 persons, but only 93 persons were found in occupation. Of these 56 were adult males, 25 adult females, and two were infant females.

The sanitary condition of the boats was good, and they were all found in a very cleanly condition.

In two cases the cabin ceilings were found to be very low; reports thereof were addressed to the owners, but without any result.

Supplies of water were ample and good, and the vessels were in a sound and clean condition.

No cases of sickness were discovered, and there were no deaths on any of the boats during the year.

Fifty-eight of the boats were engaged in coal traffic, four in the conveyance of acid, and one each in carrying bricks and cotton.

Nearly all the inspections were made at the Patricroft Coal Wharf.

Workshops.—The number on the register, exclusive of bakehouses, is 139, an increase by 8 as compared with the previous year. 321 visits of inspection were made.

The rooms in use number 180. The trades for which they are used are as under :—

Bootmaking & Clogging...	40	Watch Repairing ...	2
Dressmaking ...	27	Hosiers ...	2
Tailoring ...	18	Brushmaking ...	1
Millinery ...	15	Instrument Repairing ...	1
Cabinet Making ...	6	Blacksmith... ..	1
Laundries ...	4	Gold beating ...	1
Wheelwrights ...	4	Basket making ...	1
Saddlery ...	4	Carriage building ...	1
Tin-plate Working ...	3	Bleaching ...	1
Joiners' Shops ...	2	Picture framing ...	1
Cycle Repairing ...	2	Herb beer brewing ..	1
Rope-making...	...	...	1.

The above have been regularly inspected. New establishments have been measured up, and all are provided with cards recording the amount of cubic capacity of each workroom, and indicating the number of workpeople permissible having regard to the space. In the various establishments 213 adult males, 136 adult females, 76 female young persons, and 26 male young persons were employed. Total, 451.

In 19 instances limewashing was found to be necessary, and 28 defects in sanitary matters were noted and attended to.

Outworkers.—Two lists of outworkers were received during the year. All the known outworkers' premises—15 in number—were inspected at least twice during the year.

There was no occurrence of infectious disease upon any of the registered workshops or outworkers premises.

Factories and Workshops.—Twelve notices of occupation of new workshops were received from H.M. Inspector of Factories, but nearly all these premises were already on our register.

In seven cases the absence of "Abstracts" was reported to the Inspector of Factories. Six statutory notices under Sec. 22 P.H.A. (Amendment) Act, 1890, were served.

General.—In addition to the foregoing, the issue of the various forms relating to the matters referred to, has been promptly dealt with, and the records of the department are kept up to date.

Public Mortuary.—Eighteen bodies were received into the mortuary at the Town's Yard. Ten were taken in for the purpose of making post-mortem examinations.

A useful feature of the work of the Sanitary Department is the loan of limewash brushes and the supply of lime for use in the cleansing of dwelling-houses. During the year there were 342 such loans of limewash brushes.

BOROUGH OF ECCLES.

FACORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

I.—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

Inspections made by Sanitary Inspectors.

Premises.	Number of		
	Inspections	Written Notices	Prosecutions.
Factories (including Factory Laundries)	12	2	Nil.
Workshops (including Workshop Laundries)	321	4	Nil.
Workplaces			
Total	333	6	Nil.

II.—DEFECTS FOUND IN FACTORIES, WORKSHOPS, & WORKPLACES.

Particulars.	Number of defects.			
	Found.	Remedied.	Referred to H.M. Inspector	Number of Prosecutions.
<i>Nuisances under the Public Health Acts :—</i>				
Want of cleanliness	21	21		
Want of Ventilation .....	....	....
Overcrowding	1	1		
Want of drainage of floors	2	1		
Other nuisances	26	26		
*Sec. 22 P.H.A.A. Act, 1890. has been adopted, and the standard of efficiency is that provided by the Secretary of State.				
*Insufficient	10	7		
Sanitary accommodation } Unsuitable or defective.....	5	5		
Not separate for sexes	1	1		
<i>Offences under the Factory and Workshops Act :—</i>				
Illegal occupation of underground bakehouse (S. 101) .....	...	...
Breach of special sanitary requirements for bake-houses (SS. 97 to 100)..	28	28		
Total	94	90		

III.—HOME WORK.

Outworkers' Lists, Section 107.

NATURE OF WORK.	Lists received from employers.							Inspection of Out- workers' Premises.	
	Sending twice in the year.			Sending once in the year.			Addresses of Outworkers.		
	Lists.	Out- workers.		Lists.	Out- workers.		Received from other Councils.		Forwarded to other Councils.
		Con- tractors	Work- men.		Con- tractors	Work- men.			
Wearing Apparel—									
(1) Making, &c. ...				1		1	1		
(2) Cleaning & washing Furniture & Upholstery...								32	
Umbrellas, &c. ...									
Total.. ..				1		1	1	32	

IV.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the year	Number.
Bakehouses	45
Bootmaking and Clogging	40
Dressmaking	27
Tailoring.. .. .	18
Millinery	15
Cabinet Making & Upholstering	6
Wheelwrights	4
Laundries.. .. .	4
Various other Trades	25
Total Number of workshops on Register..	184

V.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory & Workshop Act (S.133)	7
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5).	Notified by H.M. Inspector. Reports (of action taken) sent to H.M. Inspector
Other matters, relative to which Notices were received from H.M. Inspector	12
„ „ „ „ „ „ remedied	12
Underground Bakehouses (S. 101) :—	
Certificates granted during the year.. .. .	Nil.
In use at the end of the year	Nil.

**Tabulated particulars of Nuisances dealt with, and of other
Work done by the Staff in the Sanitary Department,
during the Year ended December 31st, 1910.**

	1910	1909	1908	1907
House Drains—taken up, cleansed & re laid ..	646	997	955	662
„ slopstone waste pipes, disconnected from.	3	...	2	3
„ bath „ „ „	2	4	3	2
„ lavatory „ „ „	...	1	...	1
„ privy drains „ „ „	316	473	363	295
„ downspouts „ „ „	101	128	135	125
„ ventilated	86	108	128	81
„ want of ... ..	...	4	8	7
Gully Traps—defective	612	947	816	515
„ want of	4	2	9	4
„ filthy	15	14	30	17
Soil Pipes—defective	14	12	15	9
„ „ ventilation of	2	4	10	8
„ bath and lavatory waste pipes disconnected from	1	...	1	...
„ downspouts disconnected from ... ..	...	9	5	4
Water closets—defective	99	54	17	1
„ various defects in	89	69	55	93
„ inefficient flush to	2	10	14	1
„ insufficient in mills, &c. (No. of cases) ...	5	3	1	6
Slop-water closets—defective	64	29	48	37
Defective privy pits	311	668	378	311
„ ashpits	67	134	102	32
„ paving of yards and passages	159	192	272	139
„ „ cellar floors, &c	31	26	26	25
„ channelling	1	1	2	2
„ slopstone waste pipes	166	169	233	152
„ brickwork around slop waste pipes ...	75	81	186	101
„ eaves gutters and spouting	146	104	104	98
„ bath and lavatory waste pipes	3	3	11	...
„ roofs	53	18	20	41
„ manure middens	1	4	5	...
„ slopstones	9	7	6	2
„ urinals	2	1	1	4
Cesspools abolished	8	3	6	4
Dirty houses cleansed	119	36	69	52
„ van dwellings cleansed	2	4	5	1
Yards, &c. cleansed	52	20	32	65
Closets, filthy, cleansed	10	19	35	18
House premises, damp	19	51	41	22
House premises, want of ventilation ...	...	42	14	...
Houses overcrowded	22	14	32	7
Accumulations of manure and rubbish ...	50	49	73	67
Buildings—obstructive to light and air, removed ...	10	7	14	55
Keeping fowls, &c. so as to cause nuisance ...	12	8	18	28
‘Backing up’ of sewage	17	22	9	2

	1910	1909	1908	1907
Street gullies, defective ...	17	7	1	19
Manholes—foul smells from ..	2	2	5	...
Sewers Defective... ..	38	36	25	19
Waste of water	103	39	63	58
Want of manure middens ...	4	5	8	8
„ ashbin accommodation ...	182	210	89	132
Miscellaneous	58	35	56	41
Milkshops and cowsheds requiring limewashing ...	4	10	5	9
„ „ defects in remedied ...	6	16	14	7
Bakehouses requiring limewashing ...	15	14	12	18
„ „ defects in remedied ...	10	3	15	1
Workshops requiring cleansing & limewashing ...	19	29	17	15
„ „ defects in remedied ...	28	4	17	22
Slaughter-houses requiring limewashing ...	2	2	...	7
„ „ defects in remedied ...	2	...	3	7
Houses let-in-lodgings requiring limewashing ...	2	...	...	...
Keeping Lodgers in unregistered premises ...	4	7	17	5
Houses let-in-lodgings—Breach of Bye-laws ...	7	4	4	6
Stables requiring limewashing ...	...	4	...	2
Fried fish shops requiring limewashing ...	4	...	...	2
„ „ „ defects in remedied ...	11	...	11	5
„ „ „ accumulations of offal... ..	1	...	5	1
Common lodging houses requiring limewashing ...	...	...	...	...
Pigstyes requiring limewashing ...	4	4	5	5
„ „ defects in remedied ...	5	4	12	2
Back to back houses converted into through dwellings	1	1	...	...
No. of privies converted into water closets ...	316	473	363	287
„ water closets provided in lieu of privies ...	548	836	651	489
„ houses not newly erected provided with new drains ...	457	641	563	358
„ preliminary notices served ...	93	12	25	87
„ committee's „ „ ...	167	65	129	141
„ complaints made under Sec. 41 P.H.A. ...	10	4	10	23
„ notices served under do. ...	7	2	4	5
„ notices under Sec. 5 of I.D.P.Act. 1890, requiring stripping and limewashing ...	26	13	13	12
„ reports made under Sec. 36 P.H.A. ...	40	70	50	52
„ notices served do. do. ...	40	70	35	28
„ of notices under Sec. 95 E.C.A. 1901 ...	18	...	...	...
„ do. houses let in lodgings... ..	5	...	...	...
„ cases before the Magistrates ...	10	4	11	3
„ letters written	2757	2940	2060	1660
„ letters received	1461	1448	1005	1083
„ of visits in cases of zymotic diseases..	622	697	371	514
„ „ „ of phthisis ...	57	72	26	48
„ „ „ in other cases of sickness ...	889	664	1051	1057
„ rooms disinfected	334	423	326	384
„ schools do.	29	8	1	5
„ books do.	21	20	20	49
„ Walls, &c. stripped and limewashed ...	260	239	183	220
„ Re-inspection of nuisances ..	5316	6698	6553	5793
„ Inspections of dwellings ...	4913	5807	4288	3804

		1910	1909	1908	1907
No. of inspections of	slaughter houses ...	178	126	87	71
"	" milkshops ...	291	272	237	164
"	" cowsheds ...	67	40	71	62
"	" common lodging houses	77	59	68	66
"	" houses let in lodgings	65	92	71	48
"	" bakehouses ...	183	167	151	170
"	" workshops ...	321	302	270	289
"	" outworkers' premises	32	34	42	47
"	" stables & piggeries	111	137	107	102
"	" van dwellings ...	86	204	94	99
"	" canal boats ...	66	63	48	45
"	" fried fish and other shops	111	179	241	182
"	" factory premises ...	12	8	12	...
"	" marine stores ...	8	...	8	...
"	" ice-cream manufact'rs premises	26	...	...	...
"	" hair-dressers premises...	13	..	...	...
"	" mineral water works ...	4	..	...	...
"	" greengrocers' premises	34	...	...	..
"	" drains and gullies disinfected	428	...	...	...
"	" school closets disinfected ...	12	...	...	...
"	" cottage water closets inspected	1155	1049	1588	1273
"	" schools inspected ...	23	2	...	6
"	" owners seen re nuisances	340	499	395	349
"	" smoke observations ...	27	2	28	4
"	" 'tests' applied to drains	838	1133	1024	66
"	" drains opened up for examination	64	83	105	69
"	" typhoid pails removed, cleansed, &c.	447	81	58	48
"	" privy pits disinfected ...	4	6	3	21
"	Notices under Sec. 93 Eccles Corporation Act				
	1901 ...	27	9	24	28
"	Certificates under Sec. 93, E.C.A., 1901	27	9	24	28

Proceedings taken before the Magistrates.

Offence.	Result of Proceedings.	Amount of Penalty.
Non-compliance with notices to abate Nuisances. Two cases. (Sec. 95 P.H.A. 1875). Defective closets and waste pipes.	Work done before hearing of summonses. Fined costs in each case.	£ s. d. 0 16 0
Do. do. (Overcrowding.)	Order granted. Fined costs.	0 10 0
Do. do. (Overcrowding.)	Order granted. Fined costs.	0 9 0
Do. do. (Defective w.c.'s waste pipes and eaves gutters) Three cases.	Work done prior to hearing. Fined costs in each case, 24/-. Subsequent cost of distress warrants, 13/6.	1 17 6
Exposure for sale of unsound fish. (Sections 116-117 P.H.A., 1875.)	Fined 20/- and special costs.	2 3 0
Non-compliance with notice, Sec. 22 P.H.A. (Amendment) Act, 1890. (Want of proper closet accommodation.)	Fined 10/- and costs	0 19 6
For defective construction of w.c. drains. (Eccles Corporation Act, 1901.)	Fined 10/- and costs	2 10 0
Do. do. (Eccles Corporation Act, 1901.)	Fined £5 and special costs	7 1 6
Non-compliance with notice requiring conversion of a privy into a water closet. (Eccles Corporation Act 1901.)	Work done. Fined costs	0 6 0
Wilfully damaging a waste paper receptacle. (Sec. 307, P.H.A. 1875.)	Fined 6/- and costs.	0 17 6
		£17 10 6

**Particulars of Streets and Passages Paved during
the year ended 31st December, 1910.**

Back Cross Street, North	...	...	} Eccles Ward.	62	Lin. yds.
Back Cross Street,*South	...	...		61	"
No. 1 Passage, Cross Street	...	...		28	"
Higher Croft (part of)	...	...	} Barton Ward.	86	"
Wilding Street...	...	...		45	"
Pleasant Street	...	...		45	"
Higson Street	...	...		28	"
Back Mount Street	...	...		46	"
Back Pleasant Street	...	...		45	"
Back Wilding Street	...	...		45	"
Back Higson Street	...	...		23	"
Tetlow Grove	...	...		93	"
Charlton Avenue	...	...	} Patricroft Ward.	155	"
Irlam Avenue	...	...		108	"
Back Charlton Avenue, East	...	...		163	"
Back Charlton Avenue, West	...	...		163	"
No. 1 Passage, Charlton Avenue	...	...		16	"
No. 2 Passage, Charlton Avenue	...	...		16	"
Back Irlam Avenue, East	...	...		94	"
Back Irlam Avenue, West	...	...		111	"
Algernon Street (part of)	...	...	} Monton & Park Ward.	200	"
Crawford Street	...	...		216	"
Highfield Drive	...	...		102	"
Langholme Place	...	...	Winton Ward.	71	"
Total	...	...	...	2,022	"

**Number of Houses certified in the Wards during
the Year ended 31st December, 1910.**

BARTON	44
ECCLES	Nil.
IRWELL	39
MONTON	32
PATRICROFT	26
WINTON	37
TOTAL	178

*Kindly furnished by the Borough Surveyor.

SECTION X

Annual Report of the Sewage Works Engineer and Manager, for the year 1910.

GENTLEMEN,

I beg to submit to you the following report upon the work of this Department for the year ended December 31st, 1910.

SEWAGE FLOW.—There has been but slight increase in the flow of sewage to the Works. Gaugings taken during February 6th to 13th inclusive gave an average dry weather flow of 1,475,000 gallons per day, as compared with 1,470,000 gallons during 1909. The trade effluent is still turned into the sewers without any preliminary treatment, and is now the subject of enquiry.

PUMPING AND TREATMENT.—The pumping and treatment of the sewage has been carried on without intermission during the whole of the year.

MACHINERY.—The boilers, engines and pumps, crushing plant, lighting plant, &c., have been maintained in good working condition.

DESTRUCTORS.—The destructors have been in full working operation the whole of the year. All the steam required for pumping, &c., has been generated by the refuse destroyed. The water evaporated was 2,763,500 gallons, and the calorific of the refuse was 1·1 lb. of water per pound of refuse.

The working capacity of the destructors during the year averaged 30·30 tons per day of 24 hours.

The whole of the ashpit refuse, dry ashes and trade refuse collected in the Borough, amounting to 10,085 tons, and 976 tons which have been carted from the tip, have been destroyed at a cost of one shilling per ton for labour. The total cost per ton of refuse destroyed, including labour, tools, interest and sinking fund charges, &c., was 1·64 shillings.

The tins, &c., are picked out and sold to the Central Hall Mission, Manchester, at 5/- per ton, and the broken glass (pale green cullet) is sold to the Withington Street Glass Works, Pendleton, at 12/6 per ton. The receipts for the year from this source being £12/1/1.

The cost for the year for repairs, firing tools, barrows, &c., for the destructors was £21/11/8.

The bye-product from the destructors in the form of clinker equalled 33 per cent of the total refuse destroyed, and was disposed of as follows:—

3,517 tons laid in spray fed filter.

170 tons used on roads, concreting, &c.

DISINFECTOR.—242 disinfections have been successfully carried out during the year. The income was £101/14/0, allocated as follows:—£35/5/0 to Building Account and £66/9/0 to Labour Account.

SETTLING TANKS.—The settling tanks have been in working operation the whole of the year. The detritus tanks were cleaned out weekly, the first two settling tanks every six weeks and the two new settling tanks every three months. The average depth of the sludge at the times was—detritus tanks, five feet; first two settling tanks, three feet; and the two new settling tanks, 2 feet 6 inches.

CONTACT BEDS.—The four half-acre contact beds in working operation are giving satisfactory results.

SPRAY FED FILTER.—Part of this filter is in working operation, the results being very satisfactory.

SLUDGE.—The sludge has been used to raise the low lying land on the field bought for tipping purposes to an agricultural level.

PRODUCE.—The produce grown on the farm consisted of cabbage, Italian rye grass and mangolds.

FARMING STOCK.—There are four horses working on the farm, and one cob for disinfecting van, &c.

The receipts from farm produce, &c., realised £188.

WAGES PAID IN THIS DEPARTMENT.

1 Engine Driver, Fitter, 35/- per wk., with overtime paid for at same rate.			
2 Enginemen, 27/- per week each,	„	„	„
7 Destructor Firemen, 30/- per week each,	„	„	„
2 Tankmen, 24/- per week each,	„	„	„
2 Teamsmen, 26/- „	„	„	„
4 Farm labourers (average) 24/- per week each	„	„	„
1 Clerk and Disinfecter Attendant, 26/- per week	„	„	„
1 Youth, 6/- per week.			

Men employed on Capital Account are paid $5\frac{1}{2}$ d. to 6d. per hour, according to the nature of the work.

EXTENSIONS OF WORKS.—The extensions and alterations carried out during the year have been as follows:—

Laying out and levelling $2\frac{1}{8}$ acres of land, taken over from the Allotment Committee.

Part construction of spray fed filter.

TABLE I.
Monthly Record of Refuse Destroyed and Cost of Destruction.

MONTH.	Ashpit Refuse.	Dry Ashes.	Fish Offal.	Carted from Tip.	Total of Tons Destroyed.	Cost of Labour per month.		
	Tns. Cwts. Qrs.	Tns. Cwts. Qrs.	Tns. Cwts. Qrs.	Tns. Cwts. Qrs.	Tns. Cwts. Qrs.	£	s.	d.
1910.								
January ...	158 18 0	639 6 2	11 7 3	107 5 0	916 17 1	46	17	6
February...	155 18 1	674 4 0	11 13 1	25 15 0	867 10 2	41	15	7
March ...	168 17 1	714 4 1	12 8 3	12 15 0	908 5 1	50	10	4
April ...	340 0 1	630 19 2	11 11 2	...	982 11 1	46	12	3
May ...	138 14 0	651 6 1	14 12 0	76 0 0	880 12 1	48	2	6
June ...	160 6 0	671 4 2	13 4 0	99 0 0	943 14 2	49	0	8
July ...	140 7 1	602 18 2	16 2 2	201 0 0	960 8 1	53	2	1
August ...	165 11 3	591 0 3	14 2 0	180 0 0	950 14 2	53	12	9
September	148 8 3	645 4 1	12 16 0	124 0 0	930 9 0	47	14	2
October ...	103 18 3	670 5 0	15 1 3	90 0 0	879 5 2	47	4	3
November.	120 18 3	753 19 1	10 12 2	41 0 0	926 10 2	44	7	11
December .	65 0 3	818 2 0	11 3 0	20 0 0	914 5 3	48	8	6
TOTAL ...					11061 4 2	577	8	6

Annual cost in labour of destroying the refuse, including cleaning out boiler flues, &c., is 1/- per ton.

The rainfall during 1910 upon the Eccles Corporation Sewage Works, as registered by the rain gauge on the Settling Tanks, which is fixed at an altitude of 74 feet above sea level, has been as under :—

Month.	Rainfall per Month.	Days on which over .01 fell.	Greatest fall.
January	3'125	15	·650
February ...	2'490	20	·330
March	·775	9	·210
April	2'675	17	·480
May.....	3'550	18	·630
June.....	3'095	14	·670
July	4'465	14	1'190
August	5'525	20	1'205
September ...	·150	5	·075
October	3'050	11	1'180
November ...	4'040	19	·680
December ...	1'560	18	·270
Total	34'500	180	

The following Table gives the annual rainfall for the last ten years :

Year.	Rainfall.	Year.	Rainfall.
1900	38'167	1905	27'103
1901	30'909	1906	32'425
1902	25'903	1907	31'798
1903	41'138	1908	30'314
1904	26'450	1909	35'091

Effluents from the Treatment of Sewage.

Nos.	Description of Sample.	Oxidizable Organic matter. Oxygen absorbed 4 hours test. Grains per gall.	Method of Treatment.	Remarks.
6	Eccles Corpora- tion. Feb. 9, 1910, 1-45 p.m. Frosty weather.	0'20	Tanks, Filters, and Land.	Slight brown tinge. Light brown sediment. No smell.
10	Eccles Corpora- tion. April 6, 1910. 12-50 p.m. Rain previous day.	0'48	do.	Turbid brown liquid. Brown sediment. No smell.
D	Eccles Corpora- tion. May 3, 1910, 6-25 p.m. Fine rain. Taken from storm overflow sewer as it discharged into the stream. Large volume passing.	8'48	A to E are crude sewage & storm overflows.	Brown turbid liquid. Dark brown sediment. Sewage smell. A noxious & pol- luting liquid.
31	Eccles Corpora- tion. Sep. 7, 1910, 1-0 p.m. Fine weather.	0'63	Tanks, Filters and Land.	Yellowish brown turbid liquid, ochrey sediment, slight smell.

(Signed),

FRANK SCUDDER F.I.C.,
For SIR HENRY ROSCOE,
Mersey and Irwell Joint Rivers Committee.

***Results of Treatment ascertained in the Laboratory at
the Sewage Works.***

Description of Sample.	Oxidizable Organic matter.	Albuminoid Ammonia.	Suspended solids.
	Oxygen absorbed. 4 hours test. Grains per gallon.		
Eccles Sewage (average).....	5.380	0.680	58.6
Settling Tank Effluent (average).....	2.570	—	5.4
Effluent from Contact Beds (average).....	.614	—	—
Final Effluent from Land (average).....	.575	0.100	—

The oxygen absorption test gives a purification of 89.3 per cent.

The albuminoid ammonia test gives a purification of 85.3 per cent.

GEORGE W. WILLIS,

ENGINEER & MANAGER.

Sewage and Destructor Works, Eccles.

